



PURCHASING

UNITED STATES POSTAL SERVICE
475 L'ENFANT PLAZA SW
WASHINGTON, DC 20260-6230

July 8, 1994

Reference: United States Postal Service Solicitation No. 102590-94-A-0011,
Interagency Kiosk Program
(The Government Connection)


Thank you for your continued interest in the Government Connection Program. Your company has been registered on the source list for the procurement and will receive a copy of the solicitation upon its release near the end of July.

In advance of the formal release, however, we have enclosed for your information a copy of the revised Statement of Work, incorporating industry comments received in response to our earlier draft. It also contains changes made as the Program has evolved. The enclosed is for information purposes only; the final solicitation may contain further changes.

At this time, it is envisioned that a single contract for a warranted, Technical Data Package and 112 prototype units for market testing will be awarded in October as a result of the solicitation, but the Postal Service will reserve the right to make multiple awards if it is deemed to be in our best interest to do so. The initial prototype effort is being funded solely by the Postal Service, although other-agency applications are anticipated. A later, separate competition will be conducted among several licensees which will have been selected by the contractor, and approved by the Postal Service. That competition will follow market testing, and be awarded for potentially up to 10,000 production units.

Questions concerning the Program should be directed to the newly-designated, undersigned central point-of-contact, at 202/268-4172.

Sincerely,



Andrew Jernell
Information Systems Purchasing,
Senior Specialist

EXHIBIT

A 2

DRAFT

Statement of Work

for the

UNITED STATES POSTAL SERVICE

"THE GOVERNMENT CONNECTION"

Project

TRANSACTION & SERVICE MANAGER

KIOSK STATION DESIGN & FABRICATION

MULTI-MEDIA DESIGN & PRODUCTION

DRAFT

Rev. 6 July '94

TABLE of CONTENTS

	Page
A.0	SCOPE 1
A.1	<u>Introduction</u> 1
A.2	<u>Scope</u> 1
A.3	<u>Intellectual Property and Data Rights</u> 2
A.4	<u>U.S.P.S. Furnished Equipment</u> 3
A.5	<u>Applicable Specifications</u> 4
A.6	<u>Definitions</u> 5
B.0	TECHNICAL REQUIREMENTS 7
B.1	<u>The Government Connection Kiosk Station</u> 7
B.1.1	Kiosk Enclosure Design Requirements 7
B.1.1.1	Deliverable Kiosk Enclosure Requirements 7
B.1.1.2	Additional Kiosk Enclosure Designs 8
B.1.1.3	Underwriters Laboratory Approval 9
B.1.2	Display and Touch-screen Subsystem 9
B.1.3	Kiosk Microprocessor Subsystem 9
B.1.3.1	Processor Requirements 9
B.1.3.2	Kiosk Microprocessor Operating System 11
B.1.3.4	Full-motion Video 13
B.1.4	Mass Storage Subsystem 13
B.1.4.1	Media 13
B.1.4.2	Content Index 13
B.1.4.3	Response 13
B.1.4.4	Network Access 14
B.1.4.5	Back-up Storage 14
B.1.4.6	Alternate Configuration 14
B.1.5	Kiosk Power Management Requirements 14
B.1.5.1	Surge Suppression 14
B.1.5.2	Battery Backup 14
B.1.6	Kiosk Station Application Support Requirements 15
B.1.6.1	Smart Card Access 16
B.1.6.2	Bank Card Access 17
B.1.6.3	Forms Management 17
B.1.6.4	On-line Inquiry Support 18
B.1.6.5	Receipt and Information Printing 18

	B.1.6.6	Customer Detection	18
B.1.7		Kiosk Ergonomics	18
	B.1.7.1	Access for the Physically Challenged	19
	B.1.7.2	Privacy	19
B.1.8		Safety and Security	19
	B.1.8.1	Access and Delivery Port Protection	19
	B.1.8.2	Electronic Access Protection	19
	B.1.8.3	Identity Verification --- Optional Requirement	20
B.1.9		Database Design	20
	B.1.9.1	Methodology	20
	B.1.9.2	Data Model	20
	B.1.9.3	Database	20
	B.1.9.4	Postal Service Database Standard	21
B.1.10		Testing	21
	B.1.10.1	Enclosure Testing	21
	B.1.10.2	First Article Functional Test	21
	B.1.10.3	Ready-For-Use Testing	22
	B.1.10.4	Kiosk System Testing	22
	B.1.10.5	Market Test	22
B.1.11		Facilities and Personnel	22
	B.1.11.1	Facilities	22
	B.1.11.2	Hardware and Software Resources	23
	B.1.11.3	Personnel--- Hardware Development	23
B.2		<u>Presentation and Applications Software Requirements</u>	24
B.2.1		Presentation Development Tools	25
	B.2.1.1	Structured Development	25
	B.2.1.2	Transportable Software	25
	B.2.1.3	Non-proprietary Language	25
B.2.2		Presentation Software Requirements -- General	25
	B.2.2.1	Multilingual Capability	26
	B.2.2.2	Kiosk Usage Logging and Analysis	26
	B.2.2.3	Contextual Help -- Mandatory Requirement	27
	B.2.2.4	Ergonomic Requirements for Presentations	27
	B.2.2.5	Access for the Physically Challenged	28
	B.2.2.6	Attraction Loop	28
	B.2.2.7	Customer Detection	29
	B.2.2.8	Alternate Access to Information -- Mandatory Requirement	29
	B.2.2.9	Screen Response	29
	B.2.2.10	Introductory Sequence	30
	B.2.2.11	User Survey	30
	B.2.2.12	Electronic Transactions	30
	B.2.2.13	Application and Presentation Treatment Review	30
	B.2.2.14	Diagnostic Test	31
B.2.3		The Kiosk Applications and Presentations	31

The Government Connection Project

	B.2.3.1	Architecture and Organization --- Mandatory Requirement . .	31
	B.2.3.2	Applications	33
B.2.4		Kiosk Presentation Development and Support Services	40
	B.2.4.1	Facilities	40
	B.2.4.2	Multi-media Hardware and Software Resources	40
	B.2.4.3	Personnel	41
	B.2.4.4	Additional Kiosk Presentation Development and Support Services	42
B.3		<u>Network Support Requirements</u>	42
	B.3.1	Transaction and Service Manager	43
	B.3.1.1	Transaction and Service Manager Functions	43
	B.3.2	Processor Requirements	44
	B.3.2.1	Operating System	44
	B.3.2.2	Mass Storage	44
	B.3.3	Power Management Requirements	45
	B.3.3.1	Surge Protection	45
	B.3.3.2	Battery Backup Power	45
	B.3.4	Network Communications Requirements	46
	B.3.4.1	Telecommunication Requirements -- Mandatory	46
	B.3.4.2	Telecommunication Protocol Support Requirements -- Mandatory	47
	B.3.5	Software Downloads	47
	B.3.6	Store and Forward	47
B.4		<u>Demonstration Unit(s)</u>	47
B.5		<u>Pilot Testing and Market Testing</u>	48
	B.5.1	Pilot Test	48
	B.5.1.1	Pilot Test Plan	48
	B.5.1.2	Personnel and Materials	48
	B.5.1.3	Pilot Test Report	48
	B.5.2	Market Test	49
	B.5.2.1	Market Test Plan	49
	B.5.2.2	Personnel and Materials	49
B.6		<u>Application Maintenance Workstation</u>	49
	B.6.1	Application Maintenance Software	49
	B.6.2	The Application Maintenance Workstation	50
B.7		<u>"Benchmarking" Report</u>	50
B.8		<u>Technical Data Package</u>	50
C.0		MAINTENANCE	52

The Government Connection Project

C.1	<u>Maintenance Options</u>	52
C.1.1	Option One - Immediate, Unlimited, On-site Maintenance	52
C.1.1.1	Warranty	52
C.1.1.2	Remedial Maintenance	53
C.1.1.3	Liquidated Damages	53
C.1.2	Option Two - Contractor's Alternate Maintenance Option	53
C.1.3	Kiosk System Maintenance	53
C.1.4	Preventive Maintenance	54
C.1.5	Termination of Maintenance	54
C.1.6	Maintenance Management	54
C.2	<u>Kiosk Station Effectiveness Level</u>	55
C.3	<u>Maintenance Plan</u>	55
C.4	<u>Maintenance Documentation</u>	56
D.0	INSTALLATION REQUIREMENTS	57
D.1	<u>Installation Plan</u>	57
D.2	<u>Kiosk Station Installation</u>	57
D.3	<u>Transaction and Service Manager Installation</u>	57
E.0	DELIVERABLES	58
E.1	<u>Kiosk System -- Kiosk Stations</u>	58
E.1.1	Kiosk Stations	58
E.1.1.1	Pilot Test Kiosk Stations	58
E.1.1.2	Market Test Kiosk Stations	58
E.1.2	Kiosk Station Configuration	58
E.1.3	Bench Test Kiosk Station	59
E.1.4	Demonstration Kiosk Stations	59
E.1.5	Additional Enclosure Designs	59
E.1.6	Software Maintenance Workstation	60
E.2	<u>Transaction and Service Manager</u>	60
E.3	<u>Presentations</u>	60
E.3.1	Presentation Material and Software	60
E.4	<u>Training</u>	60
E.4.1	Training	60
E.4.1.1	Kiosk System Operation	60
E.4.1.2	Kiosk Station Operation	60

The Government Connection Project

	E.4.1.3	Hardware Maintenance	61
	E.4.1.4	Software Maintenance	61
	E.4.2	Training Location	61
	E.4.3	Schedule of Training	61
	E.4.4	Training Plan	62
	E.4.5	Training Documentation	62
E.5		<u>Maintenance</u>	62
	E.5.1	Maintenance and Service	62
	E.5.2	Maintenance Plan	62
	E.5.3	Maintenance Documentation	62
E.6		<u>Facilities</u>	62
E.7		<u>Personnel</u>	62
E.8		<u>Design Reviews</u>	63
	E.8.1	Hardware Design Reviews	63
	E.8.2	Presentation Design Reviews	63
	E.8.3	Database Design Review	64
E.9		<u>Documentation</u>	64
	E.9.1	Documentation	64
	E.9.2	Intellectual Property and Data Rights	64
E.10		<u>Pilot and Market Test</u>	65
	E.10.1	Pilot Test Support	65
	E.10.1.1	Pilot Test Report	65
	E.10.2	Market Test Support	65
	E.10.2.1	Market Test Report	65
E.11		<u>Technical Data Package</u>	65
E.12		<u>Presentations and Agency Liaison</u>	65
E.13		<u>Technology Refreshment</u>	66
F.0		FUTURE REQUIREMENTS	67
F.1		<u>Future Kiosk Requirements</u>	67
	F.1.1	Dial-in Access	67
	F.1.1.1	Dial-in Modem Access	67
	F.1.1.2	Dial-in Touch-tone Access	67
	F.1.2	Voice Recognition	67
	F.1.3	Video Capture	67
	F.1.4	FAX	67

The Government Connection Project

F.1.5	Optical Character Recognition (OCR)	67
F.1.6	Customer Input Using a Floppy Disk	68
F.1.7	Telephone and Video Support	68
F.2	<u>Postage Vending</u>	68
F.3	<u>Remote Multi-media Applications Support</u>	68
F.4	<u>Access for the Physically Challenged</u>	68
G.0	MANAGEMENT	70
G.1	<u>Reporting Requirements</u>	70
G.1.1	Monthly Progress Reports	70
G.1.2	Miscellaneous Reports	70
G.2	<u>Communication</u>	71
G.3	<u>Schedule and Staffing</u>	71
G.3.1	Schedule	71
G.3.2	Staffing and Organization	72
G.4	<u>Agency Liaison Support</u>	72
H.0	PROPOSAL PREPARATION REQUIREMENTS	73
H.1	<u>Statement of Compliance</u>	73
H.2	<u>Technical Proposal</u>	73
H.2.1	Format	73
H.2.2	Content	73
H.2	<u>Program Plan and Project Schedule</u>	74
H.3	<u>Management Proposal</u>	74
H.4	<u>Cost Proposal</u>	74
H.5	<u>Vendor Supplied Equipment Documentation</u>	74
H.6	<u>Optional Requirements</u>	75
H.7	<u>Personnel</u>	75
H.8	<u>Facilities</u>	75

H.9

Proposal Delivery 75

STATEMENT of WORK

A.0 SCOPE

A.1 Introduction

The Government Connection (GC) project's purpose is to deploy a national platform and/or network of kiosk stations which provide the American public with the means to transact business with local, state, and federal agencies and service providers. The production kiosk system may or may not be deployed by the USPS depending on the results of study efforts that are under way. The GC program's products and services consist of the aggregate set of applications which government agencies and service providers will deliver through this system. These products and services are expected to include transactions in such categories as: searching and applying for jobs; filling out applications for licenses and benefits; printing forms; ordering and paying for documents and products; electronic benefit distribution; tourism and vacation services; requests for specific, personal information; and general "who, what, where" government service information.

A.2 Scope

This effort will proceed in two phases. In Phase I, of the Government Connection program, the contractor(s) shall develop, fabricate, integrate, and test prototype kiosk units, develop multi-media presentation software for use by the prototype kiosk platforms, and demonstrate kiosk system operations in a network environment. Phase I will conclude with the Market Testing of kiosk stations deployed as individual platforms or in a network environment. Phase II, or production phase of the Government Connection program will ultimately result in a multitude of kiosk stations deployed in public places in a nationwide network if it is determined that there is a demand for a national scale service and if the economics warrant full deployment. Other options, in the future, could include Postal development of Phase I on a research and development basis and Phase II production deployment by one or more non-Postal federal agencies.

During Phase I the contractor(s) will develop a suitable kiosk station hardware platform, a transaction and service environment on a network, and integrated presentation software with the built in capability to provide for expansion in functionality as well as rapid assimilation of new requirements. Key technical features of this kiosk will include interactive multi-media presentations, a touch-screen interface, digital recording and playback of sound and video for presentation to users, and a convenient, attractive, and secure enclosure for the kiosk station equipment.

Phase I will include concept demonstration and a Pilot Test, intended to demonstrate and debug the integrated kiosk stations and network system capabilities and operations. Two (2) units will be provided for design demonstration and twelve (12) kiosk units will be built for use in the Pilot Test. It may be necessary Between Pilot Testing and Market testing, to implement specification and design changes to assure that Market Testing proceeds with system operation and kiosk units which represent as closely as possible the production units and system operation.

During the Phase I Market Test, approximately one hundred (100) production configuration kiosks will be deployed in one or more predetermined areas for a selected period (up to three months). Each kiosk station will be connected to a telecommunications network capable of conducting customer inquiries, on-line, against databases located on local, state and federal government host systems which are also connected to this network. Phase I requirements also include batch communication with host systems via this network and demonstrating the software and hardware maintenance capabilities of the kiosk system Transaction and Service Manager hardware and software. The purpose of the Market Test is to establish a valid business case for national deployment. This test will be designed, monitored, and evaluated by an independent contractor. National deployment (Phase II) will take place only if the Market Test shows that the kiosk system is a viable enterprise.

Phase II of The Government Connection program will commence only if the Pilot Test and Market Tests are concluded satisfactorily and will last for three (3) years after award of contract. The start of Phase II will be authorized only after the acceptance of the production version of the kiosk stations, and after a determination is made for the number of production units and the deployment schedule for the kiosk hardware and software, including service contracts for hardware and presentation software maintenance and network operations. During Phase II, the contractor(s) will be responsible for fabricating, deploying, and maintaining the kiosk stations nationally, operating the kiosk network, designing additional multi-media presentations, incorporating changes, distributing new releases, and ensuring that any modifications and enhancements do not negatively affect any of the functionality of any previous presentations residing on the kiosk.

The Postal Service reserves the right to select one or more contractors. To facilitate the wording of this document, however, contractor(s) are referred to in the singular in the following sections.

A.3 Intellectual Property and Data Rights -- Mandatory Requirement

The intent of this section is to assure that the contractor delivers to the USPS under this contract all materials with all appropriate Intellectual Property and Data Rights transferred to the USPS free and clear and all third party licenses paid. For the consideration and treatment of Intellectual Property and Data Rights and licenses all materials provided to the USPS by the contractor under this contract shall be divided into the following three categories:

- Category (a): all material prepared and developed by the contractor under this contract for the execution of this contract and paid for under this contract,
- Category (b): all pre-existing materials, i.e. material prepared by the contractor and used by the contractor in this contract but not prepared or paid for under this contract, and
- Category (c): all material purchased from third parties such as commercial stock image libraries, commercial off-the-shelf software (COTS) developers, etc., and used in the execution of this contract.

Category (a) Intellectual Property and Data Rights

All software, documentation, scripts, data files, videos, visual files, graphics, narration, audio files including music, hardware, and other materials developed under this contract for use with the kiosk system delivered to the USPS shall be the intellectual property of the USPS. The USPS shall enjoy unconditional and unlimited rights, free and clear, to make any use whatsoever of these items, including the right to supply these items, without any additional license, fee, or other claims, to any other party.

The contractor shall apply in writing, from the USPS, for permission to use the kiosk, the kiosk system, or any of the Category (a) materials, in part or in aggregate, for any purpose other than the fulfillment of this contract.

Category (b) Intellectual Property and Data Rights

All pre-existing non-COTS software, graphics, visual and audio files, including music, etc. which was created, developed and provided by any contractor or subcontractor to the USPS under this contract shall be transferred to the USPS, free and clear, with "joint rights in property" as per the FAR standard provisions, in which both the government/customer and the contractor/developer have unlimited rights to reuse the material any way they choose.

Category (c) Intellectual Property and Data Rights

All pre-existing COTS software, documentation, graphics, visual and audio files, music, etc. shall be transferred to the USPS, free and clear, with the appropriate license fees, re-use rights, site licenses, etc. paid for by the contractor under this contract, for use in the kiosk system. Computer software which may come under this category includes:

- hardware, software drivers, libraries, and utilities and their documentation used to prepare and execute the presentation software,
- compilers, linkers, interpreters, editors, and debuggers and their documentation used in development, test, and support, and
- special purpose development environments such as multi-media authoring tools, test-bed tools, etc. and their documentation.

Certification

The contractor shall certify in the proposal that they will meet the intent and the particulars of the above requirements.

A.4 U.S.P.S. Furnished Equipment

The USPS will furnish to the selected offeror the following items for use in the development of The Government Connection kiosk system:

- a) Still images, videos, sound recordings, and graphics for use with the multi-media presentations as available from the participating agencies.
- b) Previous specifications and other materials describing the requirements of any other Government entities that have elected to participate in the kiosk pilot effort prior to completion as available.
- c) One or more sets of the fabricated kiosk station hardware and the software maintenance workstation will be loaned back to the contractor, after acceptance, for use in development, testing, and maintenance support during the conduct of this contract.
- d) The USPS will purchase and provide to the selected contractor any Oracle Corporation products as required to complete this project.

At the conclusion of this contract the contractor shall deliver to the USPS all equipment on loan and materials such as: test kiosk stations, computers, video equipment, printers, component hardware, utility and authoring software, graphics, presentation media, audio and video tapes, documentation, story boards, scripts, etc. generated, fabricated, and purchased for the fulfillment of this contract.

A.5 Applicable Specifications

The following standards and requirements shall define requirements for this Statement of Work (SOW) where specifically called for in the body of this document. The applicable documents shall be those in effect on the date of the request for proposal (RFP):

Military

User Interface Specifications for the Joint Maritime Command Information System (JMCIS), Version 1.3, November 1993; Space & Naval Warfare Systems Command, Washington, D.C. 20363-5100

U.S. Postal Service

USPS-STD-10 Engineering Drawing Standard

USPS-P-786 Reliability and Maintainability Requirements of Postal Hardware Systems

Industry

Underwriters Laboratories, Safety Standard UL-478

Underwriters Laboratories, Safety Standard UL-701-F

National Electric Code

National Fire Protection Association

Humanscale Series (MIT Press, 1974 and 1981) -- Designed by Dryfuss Associates

IEEE Standard Guide on Surge Voltage in Low Voltage AC Power Circuits, Final Draft
2, August 1980

American National Standards Institute

ANSI/V 478-1979 (Personnel safety checklist)

ANSI/U-291 Standard for Automated Teller Systems

ANSI x.12 Safety Standard for Office Appliances and Business Equipment (also
identified as ANSI/U 114)

Federal Communications Commission

FCC Docket 20780, as amended (FCC Regulations for Class A equipment)

FCC Docket -- Part 15, subpart J, Class A

FCC Docket -- Part 15, subpart J, Class B

FCC Measurement Procedure MP-4, FCC Measurement of Radio Noise Emission from
Computing Devices

A.6 Definitions

Authoring tool or software:

That software package or complement of software necessary to produce multi-media presentations integrating and coordinating the use of various storage media, data sources, display and audio equipment, input equipment, etc. to produce a sequence of displays which contain video, text, graphics, and audio material.

COR:

Contracting officer's representative.

ISO:

International Standards Organization

Kiosk, kiosk unit, or kiosk station:

Refers to the complete, kiosk unit, fully equipped, including the presentation material, input and output hardware, computer and multi-media platform, enclosure, etc.

Kiosk system:

Includes the kiosk stations, transaction and service center operations, and the network connecting the kiosk stations to each other and the transaction and service center.

Mandatory Requirement:

A requirement that must be met by the contractor without any exceptions. Failure to respond to any such requirement or taking exceptions to a mandatory requirement will disqualify the proposal for any further consideration.

MTBF:

Mean time between failure.

MTTR:

Mean time to repair.

Multi-media:

The hardware and software combination which provides the ability to reproduce sound and screen displays which include video, text, and graphics alone or in any combination.

Software:

Sometimes referred to as application software, presentation material, or presentation software; includes the run-time version of the full complement of multi-media application programs, graphics, video, text, sound, data base, screen displays, etc. which are required for a fully functioning kiosk.

TDP:

Technical Data Package

Transaction and Service Manager:

The "logical entity consisting of the facility, hardware, software, people, and other resources employed to interact with the kiosk stations and which is employed to transmit and receive messages to and from the participating agencies and service suppliers. Kiosk user transactions intended for agencies and service suppliers will make use of this transaction manager in one form or another. For example, protocol conversion and agency specific procedures, etc. will be provided by this facility for agency interfaces.

USPS:

United States Postal Service

B.0 TECHNICAL REQUIREMENTS

B.1 The Government Connection Kiosk Station

The contractor shall design, fabricate, or purchase a kiosk station designed for use indoors by a single customer, which meets the requirements of this Statement of Work (SOW).

B.1.1 Kiosk Enclosure Design Requirements

B.1.1.1 Deliverable Kiosk Enclosure Requirements

The kiosk station enclosure requirements are:

- a) The physical housing of the kiosk station shall completely enclose all working parts of the kiosk with the exception of those user interface devices such as the video display, touch-screen, bank card reader, printer paper dispensing slot, and keyboard (if present) which are used primarily for interaction with the customer. The enclosure shall be lockable; safe against tampering, liquid, and dust intrusion; and in particular shall prevent access to the internal components by unauthorized persons. The enclosure design shall provide fork lift type fork access to facilitate moving the enclosure. The overall size of the enclosure shall be such as to allow for moving it through corridors and standard doorways.
- b) The enclosure shall provide user interfaces so as to be accessible to the widest audience, 5 percentile (i.e. short stature) females through 95 percentile (tall) males, including persons in wheelchairs. Movable screens or other articulated enclosure designs are not acceptable.
- c) The kiosk enclosure shall have provisions for securely mounting a keyboard, or retrofitting with a keyboard, when and if the presentation material requires the presence of a keyboard. The desirability or undesirability of a sloping shelf shall be discussed in the proposal.
- d) The enclosure design shall provide a feeling of privacy for the user.
- e) Speaker installation shall be such as to limit the projection of the sound, as much as possible, only to the user.
- f) The kiosk shall hold all internal components securely, so that they are not damaged by the actions of personnel who may be required to relocate the kiosk within a facility, provided that normal caution is exercised during such relocations.
- g) The enclosure shall have provisions for leveling and for fastening it to the floor or wall when desired.
- h) All visible components of the kiosk, when supplied to the USPS for placement in Postal lobbies, shall be painted in colors approved by the USPS for use in Postal facilities. A guide to these colors will be provided after award.

- i) The kiosk shall present a business-like appearance. All external components of each kiosk design must be approved for compatibility with the U.S. Postal Service Corporate Image. In particular, the kiosk should avoid creating the appearance of a video game or other entertainment system which might attract unwanted users. Signage and graphics on the enclosure shall provide information as to the content of the kiosk in clear and simple language. The contractor shall obtain approval in writing for the appearance and look of the enclosure from the COR prior to purchase or manufacture.
- j) The enclosure shall be easily cleanable and shall not fade or discolor from the use of household cleaning materials or exposure to sunlight. The enclosure finish shall resist scratching, marring, and resist graffiti.
- k) The enclosure shall provide protection to the kiosk system from Electro-Magnetic Interference produced by light industrial machinery encountered within USPS or other agency facilities.
- l) The enclosure shall have an illuminated sign identifying the purpose and availability of the kiosk to prospective users.
- m) The enclosure shall be provided with a simple, self-contained "bang-and-tilt" alarm.
- n) The enclosure shall provide sufficient filtered ventilating air to prevent the overheating of the internal components. The filters shall be easily cleanable and replaceable. The offeror shall describe in the proposal, a design to achieve the appropriate ventilating requirements for the proposed kiosk station equipment complement installed in the enclosure.

B.1.1.2 Additional Kiosk Enclosure Designs

Three additional kiosk enclosure concept (paper) designs shall be provided during Phase I by the selected contractor. Each of these designs shall meet the requirements stated above. In addition to the above requirements, these kiosk enclosure designs shall provide the following kiosk installation configurations:

- a) Single kiosk stations designed to permit docking in side-by-side arrangements of 2, 3 or 4 kiosks. The contractor shall identify hardware efficiencies possible through clustering of kiosk stations.
- b) An "embedded" kiosk configuration, which permits the works of the kiosk to be inserted "through the wall" in facilities where public floor space is at a premium or special security considerations prevail.
- c) A "portable" kiosk, with locking wheels, special transportation crate, and vibration isolation hardware, capable of being relocated easily by non-technical personnel.
- d) A library configuration "kiosk enclosure". This "enclosure" configuration shall provide for a suitable way to install the kiosk stations equipment complement in a library, preferably on a desk-top with a keyboard.

B.1.1.3 Underwriters Laboratory Approval

The contractor shall obtain Underwriters Laboratories (UL) approval for the kiosk station enclosure and installed equipment for the production design station including Underwriters Laboratories, Safety Standard UL-478 and UL-701-F.

B.1.2 Display and Touch-screen Subsystem

The following features shall be present on any kiosk station delivered under this contract.

a) The kiosk station shall be provided with a 17 inch minimum diagonal, "flat faced," .28 mm dot pitch maximum, low emission "green," video monitor with supporting hardware and software capable of displaying resolutions of at least 1024 x 768 pixels, non interlaced, with a minimum of 256 simultaneous colors.

b) The display subsystem shall be fully equipped with all hardware and software necessary to replay video sequences within a software definable window, up to full screen size, on the kiosk display as part of the user interface, under the control of applications software. A video refresh rate of 30 frames per second is required. The replay of digitized, 4 bits minimum fidelity audio, either in conjunction with the video playback or stand-alone is also required. The video board/processor shall have the equivalent of 2 MB of RAM minimum. It is desirable that the video playback functions be equipped with a separate dedicated computing engine to execute the algorithms for video compression and decompression without utilizing the microprocessor which executes the applications software.

c) The display subsystem shall be equipped with all hardware and software necessary to support an integral touch-screen and touch-screen functions. The touch-screen shall detect the touch of a user upon the display screen with no greater than 1/4 inch diameter spatial error from the center of the touch target to the touch position. The touch-screen registration adjustments shall be provided automatically by software. User menu selections using the touch-screen shall be supported by an extensive touch-screen support subroutine library. The touch-screen shall be easily cleanable, scratch resistant, and be able to be activated with a gloved finger. It is desirable that the touch-screen be field replaceable without replacing the monitor.

The contractor may offer an alternate implementation which meets or exceeds the above requirements. This alternate may be an active color LCD panel or equivalent device. If an alternate is offered, the offeror shall describe the proposed equipment fully and describe in detail how this alternative will benefit the project.

B.1.3 Kiosk Microprocessor Subsystem

The contractor may offer an alternate implementation which meets or exceeds the requirements described below. If an alternate is offered, the offeror shall describe the proposed equipment fully and describe in detail how this alternative will benefit the project.

B.1.3.1 Processor Requirements

- a) The kiosk shall include at least one microprocessor subsystem for the execution of operating system and presentation applications software. The microprocessor shall have an internal word size of at least 32 bits. All data paths between the microprocessor and cache memory, local memory, video processor, and any extended memory shall transfer data along paths at least 32 bits wide. The kiosk installation environment may require that the microprocessor have a "ruggedized" chassis to address such problems as vibration, loose expansion cards, slide drawer mounting, and cable management. The proposal shall address these issues and provide a potential solution.
- b) The microprocessor shall utilize a pipelining scheme for instruction fetching, decoding, and execution to enhance processor speed.
- c) If the microprocessor supplied is of the type commonly known as a Reduced Instruction Set Computer (RISC), which executes one instruction per clock cycle, it shall have a processor clock speed of at least 100 Mhz.
- d) If the microprocessor supplied is of the type commonly known as a Complex Instruction Set Computer (CISC), it shall have a processor clock speed of at least 50 Mhz.
- e) The backplane bus of the microprocessor shall be capable of supporting full 32-bit wide instruction fetches and data access. It shall be able to transfer data at a rate of at least 40 Mbytes per second. The bus shall support access down to single byte addresses, as well as block DMA transfers.
- f) The microprocessor shall support a full 32 bit address space, with integral memory mapping for efficient multitasking.
- g) The microprocessor shall contain integral floating point support hardware, or shall be supported by a floating point coprocessor.
- h) The microprocessor subsystem shall be equipped with sufficient RAM to support the Operating System, all user interface support, all required software drivers, all applications programs, and in addition have 50% spare capacity for future expansion of the software. The memory must be capable of expansion to at least 64 Mbytes within the same chassis.
- i) The microprocessor subsystem shall be equipped with at least one floppy disk drive of at least 1.44 Mbyte capacity and at least one 5 1/4 inch CD-ROM drive. Both of these devices shall be mounted internal to the microprocessor enclosure and shall be available only to authorized personnel.
- j) The microprocessor subsystem shall be fully integrated with all other hardware and software within the kiosk as necessary to support all required functions of the kiosk system.
- k) The microprocessor subsystem shall be equipped with a keyboard with integral vectoring pads, the previously described user's display monitor, and all other devices, cables, connectors, and miscellaneous items necessary to fully support all required functions and support duties of the

kiosk system. This keyboard shall be stored inside the kiosk enclosure for use by a service or maintenance technician; it shall not be used as a customer interface.

l) No proprietary microprocessor bus technology shall be utilized in the kiosk system. All such components shall be available from at least two separate and credible manufacturers.

m) The kiosk shall be designed using open technology that will allow the USPS to purchase "off the shelf" add on cards and peripherals as future needs arise. Proprietary technologies with limited availability will not be acceptable.

n) In order to support future links to other USPS equipment or networks as well as the connection of new peripheral devices, when and if required, each prototype kiosk processor chassis shall have slots (space), power, and cooling to accommodate additional boards, memory, storage, etc.

B.1.3.2 Kiosk Microprocessor Operating System

B.1.3.2.1 Operating System

The contractor may offer an alternate implementation which meets or exceeds the requirements described below under this heading. If an alternate is offered, the offeror shall describe the proposed equipment fully and describe in detail how this alternative will benefit the project.

a) The Operating System software which is supplied for the microprocessor within the kiosk system shall be a fully multi-tasking, multi-threading operating system capable of executing multiple concurrent applications programs without delays detectable by the user.

b) The Operating System shall support an integral screen oriented Graphical User Interface(GUI), with icon command prompts capable of activation via a point and click device such as a "mouse", trackball, or cursor arrow in combination with the touch-screen.

c) All software drivers, libraries, communication modules, etc. which shall be necessary to extend the functions of the Operating System in order to support the full required functionality of the hardware within the kiosk system shall be supplied with the kiosk. This software shall be fully integrated with the Operating System and be fully accessible to support all required functions of the applications programs.

d) Only such Operating System technology which is found in readily-available and non-customized commercial processing applications shall be utilized in the kiosk system. Operating System software shall be supported by at least two separate and credible sales and service vendor organizations.

e) The Operating System shall include a utility for automatic virus protection of the resident software.

B.1.3.2.2 Diagnostics

The prototype kiosks, which are intended for Pilot Testing and Market Testing, shall provide only the diagnostic capability which is available with the purchased equipment. This diagnostic capability shall be implemented as follows:

a) Each kiosk system shall provide both passive and pro-active diagnostic capability. For passive diagnostics, each kiosk shall contain a modem capable of receiving dial-in or dedicated remote connections. Sessions established on the kiosk processor via this link shall be capable of retrieving the current status of kiosk components including: 1) working/out-of-order status, 2) on-line/off-line Status, 3) out-of-paper conditions, 4) out-of-toner conditions, 5) paper-jam conditions, 6) other applicable device status or errors, and 7) date of last maintenance and maintenance action.

b) In addition, the kiosk shall proactively dial-out/communicate to report to a maintenance host any error condition which prevents the kiosk from providing any of its services to the public. Errors which prevent the kiosk from communicating shall cause a prominent error message to be displayed on the kiosk screen with an 800 number maintenance contact request.

B.1.3.2.3 Power Down and Power Up Requirements

In case of power failure the operating system shall provide the following functions to include at a minimum:

- a) Completion of any ongoing customer transaction in an expeditious and fully correct manner.
- b) Return to the customer of any cards, receipts, forms, or other items which are part of any ongoing transaction.
- c) The display of some visible out-of-service indication and polite rejection of further customer requests.
- d) Flushing and completion of all file I/O, database "commits", index updates, and telecommunications exchanges.
- e) A pro-active network or dial-out modem communication attempt to advise the maintenance organization of the outage.
- f) Orderly closing of all files, databases, and telecommunications connections.
- g) Orderly "shutdown" of the processor operating system.

The kiosk shall automatically "reboot" and return to service in unattended fashion upon restoration of external power.

B.1.3.3 Communications

The kiosk processor shall be provided with a 9,600 to 28.8 kbps V32/42 bis internal modem with

automatic speed selection and downward compatibility for dial-out/in access as the baseline requirement. Additional communications requirements are described in the Network Services and Requirements section of this document. The specific communication interface with which the station will have to be equipped will be selected individually for each station depending on its location and the available network connection.

Communications hardware and software shall provide dial back security.

Communications security shall include DES encryption of all messages to and from the kiosk stations.

B.1.3.4 Full-motion Video

Full-motion video shall be displayed at approximately 512 x 480 resolution as a minimum. Programmable, real-time video manipulation capability shall be provided on a per-frame basis to enable special effects such as skewing, video backgrounds, dissolves, etc. Simultaneous display capability of motion video with graphics and text overlays accompanied by audio shall also be provided.

B.1.4 Mass Storage Subsystem

B.1.4.1 Media

In addition to a highly reliable hard drive of 540 Mbytes minimum, each kiosk shall contain a mass storage system such as a CD-ROM which is automatically accessed whenever it is required to support the current user interaction. The media, or combination of media drives, utilized within this mass storage subsystem shall provide the capability for adding and deleting data and graphics to upgrade, change, or add to the resident presentations. The capacity to store a minimum of 30 minutes of full screen, full motion video on CD-ROM, with proportionally greater playback capability for smaller windows shall also be provided.

PCMCIA II slot and interface shall also be provided.

B.1.4.2 Content Index

The mass storage subsystem shall be utilized to store the audio, video, and graphical portions of the multi-media user applications for the kiosk. The kiosk operating software shall maintain an index of the contents of the mass storage subsystem so that all available media elements stored on this media are automatically associated with, and retrieved by the appropriate applications software when interacting with the user.

This index shall be updated automatically whenever changes are introduced in the resident presentations.

B.1.4.3 Response

If a mass storage system is offered which requires the automatic mounting and dismounting of physical media on a drive, the delay to access the newly mounted media shall not exceed 20 seconds. Whenever such a delay is expected, the user experienced delay shall be minimized and shall not ever exceed 5 seconds of inactive wait time. The average user experienced delay shall not exceed two (2) seconds and the user shall be advised with a message noting the reason and the expected delay time. (Also see Presentation Requirement Section.)

B.1.4.4 Network Access

The contents of the mass storage subsystem shall be accessible through a network connection to the kiosk system utilizing the TCP/IP protocol suite. Remote host systems shall be able to connect to the kiosk using TCP/IP, and shall be capable of replacing material stored on the mass storage subsystem utilizing the File Transfer Protocol (FTP). Additional network access requirements are described in the Network Services and Requirements section of this document.

B.1.4.5 Back-up Storage

The configuration of the mass storage subsystem shall provide for the back-up, redundant, storage of critical programs and information on independent storage media. Critical programs and information may include communication software for diagnostics and out of service reporting, bank card transaction software, etc.

B.1.4.6 Alternate Configuration

Vendors are encouraged to recommend solutions providing the same or better mass storage functionality, that is more cost effective, or a better technology than that described above. Such solutions will be favorably considered. If an alternate is offered, the offeror shall describe the proposed equipment fully and describe in detail how this alternative will benefit the project.

B.1.5 Kiosk Power Management Requirements

B.1.5.1 Surge Suppression

Surge protection shall meet the requirements of:

IEEE Standard Guide on Surge Voltage in Low Voltage AC Power Circuits, Final Draft, dated 2 August 1980.

All Kiosk systems delivered to the USPS under this contract shall be equipped with power protection in the form of industry standard surge suppressor capable of protecting the Kiosk computer from interruptions in service due to electric transients found in malls and typical light industrial electrical service power. In addition, the surge suppressor shall protect the kiosk microprocessor and peripheral equipment from damage due to spikes or surges in the electrical power supplied to the kiosk or through the phone and modem lines attached to the kiosk.

B.1.5.2 Battery Backup

Each kiosk station shall include battery backup power and a backup battery charging system. Upon total loss of AC power, momentary reduction in AC power, momentary loss of power, or brownout of normal external power, the battery backup shall prevent any interruption of processing by the CPU and kiosk peripheral devices. In cases of momentary reduction or loss of power the battery backup shall provide power to continue kiosk operations for a minimum of fifteen (15) consecutive minutes. Complete recharging of discharged batteries shall not exceed three (3) hours. Battery charge shall be maintained at an optimum level automatically.

In cases of extended and ultimately total loss of power, the battery backup shall provide power until an orderly shutdown of the kiosk has been achieved. In such cases, the battery backup power system shall notify the kiosk processor through an RS232 serial port connection or similar mechanism that a power failure condition has occurred and a minimum of five (5) minutes of power remains to conclude a transaction. The battery backup power system shall then provide to the kiosk processor and peripheral equipments sufficient power to execute an orderly shutdown of all functions.

B.1.6 Kiosk Station Application Support Requirements

Some, if not all, of the following requirements have both hardware and presentation software implications and are described in this section. Where and how they are to be implemented in a particular presentation will be determined as part of the applicable presentation. The enabling hardware, system, and communication aspects of these requirements are, however, requirements which shall be implemented as part of the basic kiosk system.

"Stand Alone" application support requirements

The applications to provide services, information, and transactions required to satisfy users shall be resident in the kiosk stations and shall be supported by a kiosk station resident data base. As a consequence, the kiosk station shall be capable of providing resident services and those services and transactions which require batch transfer to service providers even when communications from the kiosk station have been interrupted. During the time communication is down between the network and a kiosk station, the station shall be capable of storing all the required communications for a minimum of three (3) days. When communication is restored, the kiosk station shall automatically, and at the earliest opportunity, transmit all communication files held in suspense.

"On-line" application support requirements

Each kiosk supplied to the USPS shall be capable of conducting on-line transactions with host computers connected via both local and wide-area networks. These transactional capabilities shall be embedded within the multi-media user applications in such a fashion as to allow users a seamless ability to transact business with other computer systems without the necessity of leaving or suspending the original user interface. Remote transactions shall be conducted in a fashion which is transparent to the user, appearing as an integrated part of the multi-media user presentation.

The Phase I network configuration in which these transactions will be initially implemented can be described as a "logical server" configuration. In this configuration the kiosks will communicate to a "Transaction and Service Manager" via a dial-up, high-speed modem or other communications interface. The Transaction and Service Manager will in turn reformat the transaction and route it to the appropriate government agency or network.

Communications security

All communications shall be protected by appropriate security measures. These measures will be specified by the Postal Service for the connections between the kiosk stations and the network, and will vary from agency to agency, and between Federal and private networks from the service center to the ultimate destination of the message. Communications security shall include DES encryption of all messages to and from the kiosk stations.

B.1.6.1 Smart Card Access

Each kiosk station shall be equipped with all hardware and software necessary to accept, validate, and perform operations with a "smart" card. Smart card operations shall be payment card oriented with such features as certified card debit, secure card reload, internal card balance check and ceiling limit check, active authentication and electronic signature generation and verification to ensure non-repudiation and transaction integrity. All transactions shall begin by entering a valid PIN. The banking related aspects of this transaction shall be simulated initially since smart card banking network connection is not contemplated at this time. All other functions, however, especially security and authentication shall be implemented. Access to the smart card reader shall be through a slot in the kiosk facade.

While the USPS has no preference as to the smart card chosen for this requirement, the contractor shall propose a card and development system which has, as a minimum, the following characteristics:

- a) The ability to secure some or all card contents by encryption, with a key accessible by PIN known only to the card user.
- b) RSA and the new NIST Digital Signature Standard (DSS).
- c) The ability to contain information stored in "files" of variable length, with formats and access flexibly defined by requiring agencies.
- d) Ease of expansion

The smart card transaction access capability must be modular in design and interface with the microprocessor through a conventional RS-232 interface so that it can easily be replaced as new technologies become available.

The contractor shall deliver to the COR one (1) complete smart card development system, identical to the equipment incorporated in the kiosk stations.

B.1.6.2 Bank Card Access

Each kiosk station shall be supplied with all hardware and software necessary to accept, validate, and receive payment from bank issued (International Standard Organization) ISO standard credit and debit cards. The bank card reader must be modular in design so it can easily be replaced as new technologies become available. The use of a "swipe" reader is preferred. The kiosk facade shall contain the card reader. Payment for goods and services using such cards shall be fully integrated into the kiosk applications software in a manner transparent to the user.

It is desirable for the bank card reader to be the same physical device as the smart card reader.

B.1.6.3 Forms Management

B.1.6.3.1 Forms Printing and Dispensing

Maintaining an electronic library of forms, as well as the printing and dispensing of these forms, is a key feature of the Kiosk stations.

a) Electronic form storage. Each Kiosk station shall contain digital storage media, if required in addition to the main storage subsystem, which shall have the capability to store digitized and compressed representations of forms and informational bulletins necessary to conduct a predefined set of interactions with the public. Requests for these forms shall be available from within the presentation software. A forms management system shall index and be capable of retrieving, in the appropriate context, all forms, bulletins, etc. stored on the kiosk digital storage media. It is expected that a Kiosk station may be required to store, in electronic form, up to 500 different forms.

b) The capability shall also be provided to allow the user to input data for a form via the touch-screen, or an attached keyboard as required by the presentation, and to store the data prior to printing the form.

c) Form printer. The kiosk shall contain a printer capable of printing forms. The proposed printer shall be a highly reliable "industrial grade" printer, have a minimum of 4 MB of RAM, handle 8.5 x 11 inch paper stock at a minimum, shall print at a minimum resolution of 300 dpi., and store enough paper for a minimum of 1,000 8.5 x 11 inch sheets. If a roll fed printer is proposed, the printer shall be provided with a mechanism to cut off the paper before it is released to the customer. Printing shall take place completely in the background and shall not slow down or stop activity on the screen. It is expected that form printing will be required both in "text mode" and "graphics mode."

d) The printer shall be secured from tampering from outside the enclosure. The paper shall not be accessible from the outside until it is released by the printer for dispensing.

e) Printing shall not appear to take "too long." To speed up the printing process, the print file shall be loaded to the printer as soon as the print option is made available to the user. At any time when a printing function is available, or is taking place, the user shall be notified of this,

and the expected time required for printing, by a clear, unambiguous, and highly visible and audible prompt. In a like manner, the customer shall be notified "up-front" in a session if the printer is not available.

The offeror shall describe the proposed printer and shall provide the following information about the printer: print speed, paper capacity, print resolution, ink or toner replacement requirements, MTTR and MTBF numbers, and the built-in request for service and diagnostic capability available for computer readout.

B.1.6.3.2 "Envelope" Dispensing --- Optional Requirement

The feasibility of storing and printing envelopes with the form printer shall be explored in the offeror's proposal. Depending on the availability of envelope printing, the applications software may allow users the ability to receive envelopes which are printed and bar-coded for an address specified by the user.

B.1.6.4 On-line Inquiry Support

Each kiosk supplied shall be capable of conducting customer inquiries against agency databases located on host systems which are also connected to the kiosk system network via the Transaction and Service Manager.

B.1.6.5 Receipt and Information Printing

Software shall be provided, where appropriate and in conjunction with the requirements of the application, to print a receipt containing all the particulars of a user transaction at the touch of a "button" on the presentation screen. This capability shall also allow the user to request a printout of the pertinent information that he/she received as a result of an inquiry.

The offeror shall propose a solution which addresses the relative merits and drawbacks of providing these printing requirements using the form printer or a separate "receipt" printer. The proposal shall discuss the attendant hardware, software, reliability, cost, maintainability, and service issues.

B.1.6.6 Customer Detection

Each kiosk system shall provide a passive means for automatically detecting the approach or presence of a customer and shall utilize this information to begin a customer interaction with a greeting and a message of welcome. The range of the detection device shall be software or hardware adjustable by the maintenance technician.

B.1.7 Kiosk Ergonomics

The kiosk shall be designed to meet the ergonomic requirements illustrated in the publication: "Humanscale Series (MIT Press, 1974 and 1981) -- Designed by Dryfuss Associates"

Some of the requirements described below are also enumerated in the "Presentation Requirements" section of this SOW. Additional ergonomic requirements are provided in Appendix A.

B.1.7.1 Access for the Physically Challenged

The kiosk stations are required to meet the "Access for the Physically Challenged" requirements.

B.1.7.2 Privacy

Each kiosk enclosure shall be designed to provide reasonable privacy for individual users. The kiosk software shall mask or obscure sensitive information entered by users from screen display.

B.1.8 Safety and Security

The kiosk station shall meet the personnel safety requirements of ANSI/V 478-1979 as a minimum.

Participating agencies may, in the future, require additional safety and security features which will be negotiated, when appropriate, as modifications to the kiosk design.

B.1.8.1 Access and Delivery Port Protection

a) Each kiosk enclosure shall be protected from both physical and electronic access by illegitimate users to the greatest degree reasonably possible. In particular, the video display monitor shall have a physical barrier between it and other internal components so that no access to other components can be gained by destroying the monitor.

b) All I/O port connections shall be securely enclosed within the kiosk housing where they are accessible only to legitimate maintenance personnel. The enclosure doors shall have alarm switches connected to an audible alarm.

c) All card, form, screen, etc. ports and openings in the enclosure shall use well tested hardware used in the ATM and self-service industries which were designed to prevent unauthorized access to the interior of the enclosure.

B.1.8.2 Electronic Access Protection

Each kiosk station shall be protected from electronic access by illegitimate users to the greatest degree reasonably possible. Provisions shall be made to assure that only authorized software, from authenticated sources, intended for the specific recipient station will be accepted for loading into the station. These security measures shall apply to all entries into the system including local hardware and software maintenance operations via keyboard and diskette as well as maintenance and network administration entries via the station's communications port.

Security measures shall include as applicable: call-back procedures, active virus protection

software, personal identification associated with all communications and maintenance activities, segmented and function specific authorizations, and the logging of all communications, maintenance activities, and software changes in a secure transaction file. Communications security shall include DES encryption of all messages to and from the kiosk stations.

B.1.8.3 Identity Verification --- Optional Requirement

In order for the public to entrust the conduct of transactions involving financial or sensitive personal information to a kiosk system, it is imperative that the kiosk be capable, in the future, of verifying the identity of the party conducting a transaction. This is also critical if service providers are to be able to realize the potential for increased efficiency inherent in electronic access by clients. The more rapidly such features can be incorporated into the kiosk platform, the more beneficial the kiosk will be to clients of government service providers.

Offerors shall describe a proposed process for reliable verification of user identities for potential incorporation in the Phase I kiosk.

B.1.9 Database Design

The offeror shall provide, in the proposal, a thorough discussion of the proposed solution to the kiosk station and system database design, development and maintenance issues.

B.1.9.1 Methodology

The kiosk station resident database and the kiosk system database shall be relational databases, designed using a formal database design methodology using an industry recognized CASE tool. The use of this methodology and CASE tool shall provide a top-down structured approach and provide support through the life cycle of the program. The CASE tool shall provide the means for generating the kiosk station data model, the system data model, the data dictionary, the database designs, and all required database design and maintenance documentation.

Object oriented data base designs may also be proposed. The alternate design shall equal or exceed the stated requirements and the offeror shall explain fully the benefits of the alternate in the proposal.

B.1.9.2 Data Model

The data model shall be generated in a series of interactive sessions attended by the "knowledge base people" responsible for developing the content of the applications. Government agency representatives shall be invited to participate as necessary to provide input. These sessions shall be organized and conducted by an experienced database system design practitioner.

B.1.9.3 Database

The database design shall provide for the storage, search and retrieval, and the updating of numeric data, structured text, unstructured text, and multi-media objects. Text search capability

shall include such "fuzzy" searches as looks like, sounds like, and the use of a thesaurus. The database shall be capable of containing and operating on multiple language and alphabet entries (e.g. English, Spanish, Chinese, Korean, Russian). The database shall also have provisions for implementing various levels of security requirements

B.1.9.4 Postal Service Database Standard

The offeror shall provide a full description of the proposed database CASE tool and the resulting database capabilities including multiple language accommodation, text retrieval capabilities, and database maintenance provisions. The Postal Service is currently standardizing on "Oracle Corporation" database products and has a purchase agreement with this supplier. While the offeror may propose another supplier, this choice will have to be convincingly supported and fully justified.

B.1.10 Testing

B.1.10.1 Enclosure Testing --- Optional

The kiosk enclosure may be required to pass a test for use in U.S. Postal Service facilities. This test would be performed by the USPS Engineering Department. Such a test will be specified, when appropriate, as a modification to the basic specification, as changes required to existing units, and as necessary contractor support, and will be provided as modifications to the base contract.

B.1.10.2 First Article Functional Test

The contractor shall prepare a draft test plan for the First Article Functional Test. This plan shall provide a detailed listing of the functions to be tested and how this test will be performed. This draft plan shall be submitted to the COR for comments and approval twenty (20) working days prior to the scheduled start of the test.

B.1.10.2.1 Hardware Functional Testing

The kiosk hardware shall be fully tested as part of the first article functional test to demonstrate that it meets all functional requirements before integration with the presentation software.

The contractor shall prepare a complete set of menu driven, kiosk resident, diagnostic test routines which shall test all the individual functions of the kiosk station and communications with the network. This same set of test routines shall be used by on-site and remote maintenance and service personnel, and may be used as well as part of the acceptance test for each kiosk prior to delivery and installation.

B.1.10.2.2 Presentation Testing

Once the kiosk platform has passed the functional tests, the presentation will be installed and tested. A representative set of user-kiosk interactions shall be developed by the contractor which

adequately demonstrate the readiness of the presentation material for customer use. This test may be used as part of the acceptance test for each kiosk prior to delivery and installation.

B.1.10.3 Ready-For-Use Testing

The contractor shall prepare a description of the proposed tests to be implemented for each kiosk station to be delivered. The acceptance test shall take place after installation and shall verify that the kiosk is fully functional and ready for use by the public. The draft of the proposed acceptance test shall be submitted to the COR sixty (60) days prior to the start of Pilot Testing (i.e. start of Pilot Test installation).

B.1.10.4 Kiosk System Testing

B.1.10.4.1 Network Communications Test

The communication capabilities between the kiosk stations, the Transaction and Service Manager, and a representative "agency" system (this connection may be emulated by contractor provided software) shall be fully tested and demonstrated forty-five (45) days prior to the scheduled delivery of the first kiosk station. A proposed test plan for this demonstration shall be submitted to the COR fifteen (15) days before the scheduled communications test date.

B.1.10.4.2 Transaction and Service Manager Test

The functional and performance capabilities of the Transaction and Service Manager shall be fully tested and demonstrated forty-five (45) days prior to the scheduled delivery of the first kiosk station for Pilot Testing. A proposed test plan for this demonstration shall be submitted to the COR fifteen (15) days before the scheduled test date.

B.1.10.5 Market Test Unit Testing

The contractor shall prepare a draft test plan for the Market Test Units. This plan shall provide a detailed listing of the functions to be tested and how this test will be performed. This draft plan shall be submitted to COR for comments and approval twenty (20) working days prior to the scheduled start of the Market Test. This test shall reflect the changes made in the kiosk station hardware and software as a result of the Pilot Tests.

B.1.11 Facilities and Personnel --- Hardware Development

B.1.11.1 Facilities

During performance of the Phase I contract requirements, the contractor shall provide a facility, or facilities in the greater Washington, DC. area for the development, fabrication, support, integration, and testing of the kiosk systems. Offers of alternate arrangements will be evaluated. If an alternate arrangement is offered, the offeror shall describe in detail, and shall provide quantitative justification how the alternate will benefit the program.

B.1.11.2 Hardware and Software Resources --- Hardware Development

The contractor shall provide and maintain for the period of this contract complete development and supporting hardware, software, and documentation which shall include but not be limited to:

- a) All hardware, software drivers, libraries, and utilities used to prepare and execute the required software development.
- b) All compilers, linkers, interpreters, editors, and debuggers used in development, test, and support.
- c) All special purpose development environments such as software development tools, test-bed tools, and other unique and essential software and hardware.
- d) All hardware and software necessary to develop and test the communication requirements of the kiosk system.

Offers of alternate arrangements will be evaluated. If an alternate is offered, the offeror shall describe how the alternate will benefit the program.

B.1.11.3 Personnel--- Hardware Development

Sufficient qualified personnel shall be available, as needed, at the above described facility with the following expertise to perform the requirements of this contract. This requirement does not, however, imply that each and every person will be required to be available all the time during the performance of this contract. In fact, it is expected that at any one time, work will be performed by a small team, or teams, of people with various expertise. One person may also have the qualifications to perform several functions. People of different expertise may then rotate in and out of a task team as the program progresses.

- a) Systems Analyst - person knowledgeable in all of the capabilities and limitations of the kiosk system who shall support the USPS and other Governmental entities in the analysis and design of new and improved kiosk functions.
- b) Systems Programmer - person familiar with all features and functions of the kiosk microprocessor subsystem and its Operating System software, capable of writing or modifying device drivers and system utilities to support desired functionality within the kiosk system.
- c) Applications Programmer - person familiar with applications software developed for the kiosk system who is experienced in the use of all editors, compilers, linkers, and other utilities used in the development and debugging of applications programs for the kiosk system. He/she shall also support the design, development, and debugging of extensions to the functionality of the kiosk station applications software.
- d) Electronic Engineer - person familiar with the hardware components of the kiosk system, capable of designing and integrating hardware to implement enhanced functions on the kiosk.

- e) Mechanical Designer - person familiar with the physical kiosk enclosure and wiring components, capable of designing and executing modifications to the kiosk to incorporate new hardware features.
- f) Configuration Manager - person skilled in the discipline of configuration management and control for both hardware and software. He/she shall perform the duties associated with managing the change process for kiosk station and system software and for tracking hardware and software distribution to the field.
- g) Quality Assurance Specialist - person skilled in the discipline of testing and quality assurance for hardware and software. He/she shall perform the duties associated with test design, execution, and error correction and shall also perform the integration and acceptance testing for the kiosk station and system.
- h) Data Security Specialist - person knowledgeable in security concerns for computer software, hardware, data, and telecommunications. He/she must be conversant in technologies such as the Clipper and DES, as well as common facilities such as RACF, and shall perform tasks such as system security analysis and design, and testing of system and network components for security compliance.
- i) Telecommunications Specialist - person knowledgeable in telecommunications software, hardware, and protocols. He/she must be conversant in the specific protocols used in kiosk system and shall perform duties such as network analysis and design, and testing of components for functional effectiveness.
- j) Database Specialist - person knowledgeable in database technologies capable of determining and implementing the data extractions required from various agency data bases.
- k) Miscellaneous Personnel - the respondent shall propose additional personnel categories as required to effectively support kiosk development for future requirements. New categories may be added upon mutual agreement between the USPS and the contractor if required after contract award.
- l) Program Manager - The line manager with hands-on responsibility and authority for the development and production of the complete kiosk system.

B.2 Presentation and Applications Software Requirements

Presentations shall be developed according to the requirement stated below and as modifications to the base contract as required to provide additional individual applications. The requirements in this section shall apply to all applications developed for the kiosk stations including those developed under individual modifications to the contract unless specifically stated otherwise.

The offeror shall meet the requirements stated in this section. It is recognized, however, that some requirements may be met by using different approaches than those described in this specification. Offers of alternate approaches which meet or better the stated requirements will

be welcome and will be evaluated. When an alternate approach is offered, the offeror shall describe in detail, and shall provide quantitative justification in the proposal, how the alternate will benefit the program.

B.2.1 Presentation Development Tools

B.2.1.1 Structured Development

All presentation (application) software written for any kiosk system delivered to the USPS (or other participating agency) under this contract shall be written in a reasonably structured manner, with sufficient comments to allow USPS and other agency personnel to determine the purpose and usage of the source code.

B.2.1.2 Transportable Software

The presentation software developed for the kiosk shall be 100 percent transportable from one hardware platform to another within the same hardware family. Transportability across hardware families is highly desirable. Hardware updates, or the replacement of one generation of hardware with the next generation shall not require any software revisions.

B.2.1.3 Non-proprietary Language

All presentation software written for kiosk stations delivered to the USPS under this contract shall be written in a non-proprietary high level language.

a) In situations where multi-media functions are more easily and efficiently written in a special purpose language such as a multi-media authoring tool, the special purpose language used shall also be a non-proprietary language. Object-oriented, "visual" technologies are required as the development environment since they provide reusable visual objects and code, and require minimum training. The authoring tool chosen shall: provide cross-platform development capability, the capability to work with diverse externally-networked data sources, the capability to add new features and extensions, provide reusable (object) code modules, be scalable, have current vendor support, and be a tool which requires a minimum of training to use. In any case, the contractor shall obtain prior consent from the COR to use a specific authoring tool.

Where appropriate, it is highly desirable that the "Mosaic" development environment be used. Such may be the case where an Internet connection is employed or the look and feel of an Internet display screen is to be emulated.

b) Coding in C, C++, Visual C++, Visual Basic 3.0, VisualAge, or other recognized standard programming language may be used for functions unavailable in the selected authoring software, provided that the source code contains comments to explain the code.

B.2.2 Presentation Software Requirements -- General

The contractor shall use as a guide the:

a) User Interface Specifications for the Joint Maritime Command Information System (JMCIS), Version 1.3, November 1993; Space & Naval Warfare Systems Command, Washington, D.C. 20363-5100

b) The USPS style guide.

All presentation software provided for the kiosk shall meet the following general requirements and provide the following functionalities as a minimum.

B.2.2.1 Multilingual Capability

The kiosk stations delivered for the Pilot and Market Tests are required to provide presentation in English and Spanish. Each prototype kiosk station shall be designed to fully support all functions supplied to all users in both English and Spanish, with the selection between languages being made by the user at the commencement of each session. However, the contractor shall design, index, size, etc. the hardware and software to allow the addition of three (3) other languages, including both Mandarin and Cantonese dialects of the Chinese language, without the need to upgrade hardware or software design.

The offeror shall demonstrate in the proposal that the multi-language support is built into the proposed application development tool, that it does not require re-coding or duplication of logic to accommodate multiple languages.

B.2.2.2 Kiosk Usage Logging and Analysis

The presentation software in each kiosk system shall include a utility which shall track, log, and be capable of reporting via a print file and through dial-in or network, interactive queries on any selectable combination of daily, day of the week, weekly, accounting period (4-week), monthly, quarterly, calendar year, and fiscal year basis the following usage statistics. Summaries and graphic displays of statistics shall be developed off-line at the service center.

a) Number of total user sessions initiated by the hour.

b) The presentation sessions initiated by the hour.

c) The identity of each application or transaction which were used per session.

d) The number of times each individual menu or screen was accessed or used in a session.

e) The number and identity of the print output provided to a user in a session.

f) The number and type of externally terminating transactions per session.

g) The number dialed, and the length of each call for each telephone call in a specific session.

h) A separate, cumulative histogram for each screen menu used by customers, of the amount of

time spent in that menu by users of the kiosk.

- i) Type of purchase, value of purchase, credit card used, card number, date and time of use, etc.
- j) Choice of language.

The contractor may alternatively propose a separate host computer to support these reporting and on-line inquiry requirements. If so, this host computer shall be updated at least daily by each kiosk station. In this case, appropriate back-up files shall be retained in the kiosk until the update is successful. All reporting and inquiry data shall be kept separate by kiosk identification number.

B.2.2.3 Contextual Help -- Mandatory Requirement

Providing help to the user is considered a critical function. Help must be available to the user anytime to operate the machine and for finding the desired information. Context related help shall be provided for every presentation screen. This help function shall provide as a minimum:

- a) Definition of unfamiliar terms. When the help function is accessed, the software shall highlight the words in the text which have a definition behind them. Touching a highlighted word shall cause the definition of the word to be presented on the screen.
- b) Offer to provide operating instructions.
- c) A key word index and word search function. This function shall provide a list of key words to the user, narrowing the selection letter by letter, and resulting in accessing the screen which provides information about the key word. The help function shall also offer the user of a "smart search" capability. (Also see "Alternative Search Function" requirements.)
- d) A description of the special provisions provided to the physically challenged.

B.2.2.4 Ergonomic Requirements for Presentations

The presentation software shall deliver the information in a form that is intuitive and easily understood by the user. Interaction with the kiosk station shall not require any familiarity with computers, computer operation, or require typing skills. Presentations shall provide an extremely simple but attractive user interface. The number and types of choices or information displayed at the same time shall be limited and give the user clearly defined unambiguous choices at any one time.

All kiosk presentation screens shall meet, as a minimum, the following requirements:

- a) All text and audio material shall be designed for a fifth grade language competency level.
- b) All text and audio material shall be free of acronyms, technical terms, "buzz words", and agency jargon.

- c) All screens shall be coded in some manner to aid "navigation", either by color, icons, or both, to relate the screen to the menu selection, agency presentation, and inquiry path.
- d) All screens shall offer: help, last screen, next screen, return to last menu, and return to main menu touch "keys".
- e) Where appropriate to enable list searches, up and down touch arrows shall be provided for scrolling the list.
- f) Text, audio, and graphics shall be used in combination to reinforce the information presented on a screen. Procedures shall be presented as a short "tutorial" sequence of "still" or "animation" screens which combine voice, text, and graphics to convey information. In such a sequence, graphics shall move, rotate, or present different perspectives to illustrate the procedure or process. Voice shall complement the text, not just read it out loud. During tutorial sequences the user shall be provided with the option to repeat or cancel the sequence.
- g) Video and audio presentations shall be short, not longer than 12-15 seconds, and to the point. The screen presented to the user shall contain a touch key to terminate the audio or video and go on. Video for the sake of presenting video is undesirable.
- h) All screens, across all presentations, shall follow the same look, feel, and input conventions.
- i) Kiosk software shall mask or obscure sensitive information entered by users from screen display.
- j) The user shall be provided with the opportunity to review and change any textual and numeric input before the presentation acts on it.
- k) Where possible, text and numeric input shall be edited for obvious errors and the user shall be afforded the opportunity to change the input.
- l) The user shall be provided with the opportunity to receive a printout of the information presented by the kiosk. Printing shall not stop or slow down activity on the screen.

B.2.2.5 Access for the Physically Challenged

The kiosk presentations, intended for Market Testing, are required to meet the "Access for the Physically Challenged" requirements as defined, to the fullest extent possible.

B.2.2.6 Attraction Loop

Whenever the kiosk is not in use, it shall display a pleasing "attraction loop" related to the "Government Connection" theme. The attraction loop shall include an appropriate musical score and "patriotic" graphics. Starting and stopping the attraction loop shall be controlled by the detection device and the customer activity "time-out" software module.

B.2.2.7 Customer Detection

a) Each kiosk station will have a passive means for automatically detecting the approach of a customer. Software shall be provided which shall utilize this information to begin a customer interaction with a greeting, a message of welcome, and a request to make a language selection. The range of the detection device will be software, or hardware adjustable by the maintenance technician.

b) When the kiosk has been idle for some software adjustable time in a session, e.g. at least one minute, it shall attempt to re-engage the user with a graphic prompt and voice request. If this attempt fails twice, the kiosk shall cancel the transaction and exit.

B.2.2.8 Alternate Access to Information -- Mandatory Requirement

USPS research has revealed that a major impediment to customer satisfaction in utilizing kiosk devices is the requirement to pass through multiple time-consuming menus and text before the customers reach "what they wanted in the first place". The presentations may contain a number of hierarchical menus, and these may be preserved if not too cumbersome. Offerors, however, are required to provide a creative, alternate mechanism for guiding users quickly to the content which the individual user is interested in viewing.

An alternate method of accessing data without going through a menu hierarchy such as a "word search" shall also be available to users. This search function shall be implemented to include all the information presentations resident on the kiosk from any agency. In effect, this function shall provide an "integrated directory of information and services". This function shall enable users to access information without requiring them to have prior knowledge of which agency or agencies supply this information. In addition, the directory shall include information related to some that may not be available through the kiosk but might be reasonably expected to be. In these instances the user is to be directed to an alternate source of information.

The search and directory function shall include a "thesaurus" of related terms and concepts. For example, a search for "mailing packages" should also return 4th Class, Parcel Post, Express Mail, etc. entries.

The search function shall not require the correct spelling of the looked for word. The search shall offer a short list of the closest matches including matches which are contextually appropriate.

This "alternative access to information" function shall be supported by a utility which shall automatically and dynamically maintain the database and indexing as changes are made to the presentation materials.

B.2.2.9 Screen Response -- Mandatory Requirement

The response to user requests which require the automatic mounting and dismounting of physical media on the drives within the mass storage subsystem (if present) shall be carefully designed

and the physical delay to access the new medium (disk), caused by such action, shall not exceed 20 seconds. All video, audio, and graphics materials shall be stored on the physical media of the mass storage subsystem in such a fashion as to minimize the number of times that physical media must be mounted or dismounted to support the user interaction.

In the case where the multi-media materials required to support the next logical "screen" or step in the interaction with the current user are not continued on the current mounted physical volume, enough of the response, or sufficient transition material shall be stored on the current media to mask as much as possible the delay caused by having to mount a new disk, thus minimizing the user experienced delay. The average user experienced delay shall not exceed 2 seconds of inactive wait time, and shall never exceed 5 seconds. In all cases, the user shall be advised with a message noting the reason and the expected delay time.

In the case where text data or the multi-media materials required to support the next logical "screen" or step in the interaction with the current user are continued on the currently mounted physical volume, the time to "seek", or compute, retrieve, and begin the display of this material shall not exceed an average of 0.2 seconds, and shall not exceed one (1) second. (This requirement may be met by a "look-ahead" or similar implementation.)

B.2.2.10 Introductory Sequence

A short introductory sequence shall be provided which allows users to select the language for the session, select the problem solving session appropriate for his/her needs, select from a combined directory of services, or search an index. This sequence shall also provide the selection of "express" or "tutorial" sessions.

B.2.2.11 User Survey

Initially this application shall survey public feedback on the kiosk's usability and value to the user. This survey shall be provided at the conclusion of a session. The ability to add, change or delete this survey in an expeditious manner shall be provided.

B.2.2.12 Electronic Transactions

As the various government agencies and other potential kiosk participants complete their future efforts to re-engineer their internal systems to utilize electronic transactions rather than paper based forms, or "800" numbers, changes will be made to the kiosk presentation software to reflect these new modes of interaction. Whenever electronic interaction between the kiosk system network and a service provider is possible, kiosk users shall be urged by the presentation to utilize the available electronic transactions.

B.2.2.13 Application and Presentation Treatment Review

A treatment concept or plan shall be developed for all applications and presentations for in depth review and approval by the COR, before the application is "hard coded". As part of this review, the contractor shall prepare a treatment plan in which the concept of the presentation is described

and illustrated. These descriptions shall contain story-boards, sketches, graphics, text, etc. in sufficient detail to illustrate the proposed look and feel of the presentation and the data to be accessed.

B.2.2.14 Diagnostic Test

A representative, basic set of user-kiosk interactions shall be developed by the contractor. This shall serve as a test and diagnostic utility which demonstrates the readiness of the combined hardware and software to run applications. This test shall demonstrate that the hardware and software is enabled and operating when appropriately instructed. This diagnostic utility shall, for example: demonstrate that the touch panel is properly calibrated and working, demonstrate that each of the various storage devices are performing as required, the index is accessing the appropriate presentations and information, information appearing on the screen or announced can be printed in multiple languages, etc.

B.2.3 The Kiosk Applications and Presentations

B.2.3.1 Architecture and Organization --- Mandatory Requirement

Applications and presentations of The Government Connection kiosk stations shall be organized to satisfied the needs of the public with respect to conducting business with local, state, and federal government agencies. It is a principal requirement that the kiosk shall provide a medium, a "virtual" window, which will allow the public to transact business with different government entities without necessarily having to deal with each and every entity separately, in a series of individual transactions. Some have called this "one-stop service fulfillment". For example, an individual shall be able to search a job bank, apply for a job, and start the process for filing for unemployment, or emergency housing, at this kiosk in one session, without having to fill out forms, or in fact even "seeing" these forms, or knowing in advance which agency is providing these services.

The effect described in the example may be achieved, for instance, by the kiosk application requesting that the customer answer a series of questions to obtain the data needed for the so called "forms" without actually showing a "form", and subsequently transmitting electronically, as approved or selected by the user, to each of the involved service providers those data elements which are necessary to complete that service provider's part of the transaction. Common information such as name and address, Social Security number, etc. shall be transmitted to all interested parties, without the customer having to "fill in" this information repeatedly .

Conceptually, this organization may be shown, see Figure YY, in a simplified form, as a matrix or "truth table", where the customer needs form the side of the matrix and the service providers are ranked along the top. Each "need" is then connected to one or more provider by a kiosk application at the appropriate junctures of horizontal (need) and vertical (provider) lines. These juncture points may be presented in a truth table as true (for a juncture) or false (for no juncture) elements in the table. This conceptualization, may help to demonstrate the required architecture or organizational philosophy of the kiosk applications.

Figure YY

Government
Information

Agriculture
City Hall
Commerce
Congress
County
Customs
DOD
DOT
EPA
FBI
FCC
FEMA
GAO
Geological Surv.
GSA
HHS
HUD
Immigration
Indian Affairs
IRS
Labor
Library of Cong
Major Vehicle
NASA
NIH
NIST
OPM
Postal Service
Public Health
SBA
State Legislature
State Police
State Department
Treasury
VA
White House

the
handg
loss of job
oving
etirement
ealth
irth
eath
uying house
elling house
chools
ocial Services
hild care
rderning
low to
;PO
lumismatic
hilatelic
ensus data
griculture
ommerce
abor
JH
Resting Labs.
Amtrak
ickets
Services
Recreation
Motor vehicle
Courts, legal
Housing
Fire
Financial
Emergency
Benefits
Social
Job listings
Transportation
Diversity
Special needs

In addition, and as stated elsewhere in this specification, the customer shall also be provided with the opportunity to go directly to a specific service providers specific transaction or retrieve specific information using such mechanisms as a "smart index" and "fuzzy" text search. Using Figure yy again, this requirement may be thought of as direct access to the SERVICES grouping and to every service provider entry in the data base.

B.2.3.2 Applications

Applications shall be developed by the contractor "from A-through-Z" including researching and developing the required content for the application, developing the interaction options, scripting the user - machine interactions, and designing and implementing the multi-media presentation.

An application may be thought of as containing one or more interconnected transactions. Transactions may be grouped into different categories depending on their complexity. These transaction categories are:

Type (1) transactions may consist of retrieving kiosk resident information about agency and service provider services, locations, service hours, entitlement information, etc. answering the general what, where, when, who, how questions and printing selected service provider and agency forms from a kiosk resident electronic library of forms.

Type (2) transactions may consist of: providing more complex searches such as requiring the selection of search parameters (e.g. looking at entries in a job bank, selecting a recreational facility); --- entering a request for information or simple services which do not require a lot of information or payment and which will be fulfilled by the service provider by mail; --- filling out and filing applications electronically.

Type (3) transactions consist of providing services which require payment with a bank card such as: searching and selecting items to be purchased and ordering them electronically; --- filling out and filing applications which require an application fee; ---

Type (4) transactions consist of on-line transaction which may or may not require payment with a bank card. Such a transaction may be selecting, reserving, and paying for a cabin in a state park.

Phase I applications shall include transactions of all four types.

Specifically, the kiosk applications shall provide the following capabilities using the underlying organization described above.

B.2.3.2.1 Basic Applications

During Phase I information retrieval and form printing will be required for the listed federal agencies and service providers and only five or six (5/6) localities and states. The states and localities will be identified by the USPS within 15 days after award of contract.

a) Form Printing --- Users shall be able to search for and print agency or service provider forms, and short, one page fact sheets or bulletins. Printing shall be provided as a result of a general index search, specific "forms, fact sheets or bulletins, etc. available" search, and at the appropriate place in wider ranging applications. The database of electronic forms, fact sheets, and bulletins shall be "automatically" updated from the change files prepared by the software maintenance workstation and downloaded from the service center overnight. If a core set of forms are stored on the CD-ROM, then updated or new forms shall be stored on the hard drive until such time when the CD-ROM is to be replaced. It may also be possible to store on the hard disk only the changes to a form, fact sheet, or bulletin stored on the CD-ROM.

The following is a non inclusive list of forms, or type and selection of forms, or material, which shall be available for printing.

- Social Security Administration (SSA) forms and bulletins

- USPS forms and bulletins

- Internal Revenue Service (IRS) forms and bulletins

- Department of Veterans Affairs (VA) forms and bulletins, including identifying Veteran Service Organizations in an area with a point of contact for each

- Health and Human Services (HHS) forms and bulletins

- Immigration and Naturalization Service (INS) forms and bulletins

- Selected local and state forms and bulletins

- Electronic Benefit Transfer (EBT) services forms and bulletins

b) Service Provider Information --- Users shall be able to search for and retrieve agency or service provider service information. Information shall be provided as a result of a general index search, specific "services, etc. available" search, and at the appropriate place in wider ranging applications. The database of service information shall be "automatically" updated from the change files prepared by the software maintenance workstation and downloaded from the service center overnight. If a core set of service information, such as the addresses, 800 numbers, etc., of providers, are stored on the CD-ROM, then it shall be possible to store on the hard disk, and retrieve from there the changes to the information stored on the CD-ROM.

Service provider information shall include as a minimum: 1) the location, 2) service hours, 3) services provided at a location, 3) 800 numbers and services, 4) access to information on the service provider's "home page" on Internet, 5) services which may be satisfied by mail, 6) answers to the 25 to 50 most frequently asked questions from each service provider, 7) ZIP+4 look-up, 8) selected information from the USPS "electronic" Domestic Mail Manual and possibly the 9) directions to the nearest service location from the kiosk.

- Request information from a service provider on a pending "case" or claim (multiple agencies)
- Transmit customer response or complaints to a service provider (multiple agencies)
- Requesting housing vouchers from state or local providers
- Requesting emergency aid from FEMA and other agencies
- Filing for local, state, and federal benefits

d) Service Requests Requiring Payment --- Users shall be able to search for and request agency or service provider services and purchase materials requiring payment by bank card or "EBT card" (e.g. Independence Card in Maryland) via the kiosk station, which shall be fulfilled by the service provider off-line, by mail. Requests for such services shall be initiated as a result of a general index search, specific "services, purchases, etc. available with payment" search, and at the appropriate place in wider ranging applications. The database of services and the information necessary to process the request shall be "automatically" updated from the change files prepared by the software maintenance workstation and downloaded from the service center overnight. If a core set of information is stored on the CD-ROM, then it shall be possible to store on the hard disk, and retrieve from there the changes to the information stored on the CD-ROM.

Some requests may only be started by the filing of the requests and paying a filing fee and may, later on, require a visit to the offices of the service provider. In such cases the process shall be clearly described to the user so that false expectations are not raised in the mind of the user as to what is and what is not being paid for and provided by the current kiosk session. Such notification shall require that the user check-off that he/she has understood the process and that continuing constitutes agreement with the process.

The kiosk stations shall provide the following service and purchase requests as a minimum. These requests shall require a bank card transaction and shall be transmitted to the applicable service provider.

Purchase Requests Requiring Payment

- Purchasing/ordering one or more items from a selection of 12,000 titles from the Government Printing Office
- Purchasing/ordering one or more philatelic items from a selection of such items
- Purchasing/ordering one or more stamps-by-mail items from a selection of such items
- Purchasing/ordering one or more numismatic items from a selection of such items
- Purchasing EE Bonds

Service Requests Requiring Payment

- Motor vehicle registration and traffic fine payment
- Paying for and filing for a naturalization request
- Filing a 1040EZ tax form and paying the tax if required
- Paying real estate tax
- Reserving and paying for a state park reservation --- requires an on-line transaction

B.2.3.2.2 One-stop Service Applications

As stated above, the key requirement of the kiosk station is to help the public solve problems using a "one-stop service" model. Following this model, the kiosk station application set shall include applications which are designed to provide services and information related to specific real life issues. These applications shall be designed to provide the appropriate services and information without the user having to know in advance who the individual service providers are or where the information is coming from. In these applications, the kiosk station shall front end, and in effect combine several of the services and information requests which can be provided in response to specific individual requests (see above).

This effect shall be achieved, for instance, by the application requesting that the customer answer a series of questions, or make concurrent selections. In this process, the application shall determine from the answers received, or selections made by the user, what the user needs are, what services are needed, who the potential providers are, and look-up in its database what the requirements for getting the services are, and the information needed by the providers to process the request or file the application for these services. Common information such as name and address, Social Security number, etc. shall be requested from the user only once and transmitted to all interested parties without the customer having to "fill in" this information repeatedly. The user shall be able to go through this process in the selected language while the information transmitted to the providers shall be in English.

The kiosk station shall in effect cause the filing of the appropriate forms (if requested by the user). This shall be accomplished by the system subsequently transmitting electronically, to each of the involved service providers those data elements which are necessary to complete that service provider's part of the transaction.

Once the session has concluded the user shall be able to request a printout, in english or the selected language, a detailed record of all that has transpired. He/she may also request "copies" of the submitted "forms," or may elect to file these forms personally instead of allowing the system to do so.

The one-stop service applications provided in Phase I shall include as a minimum:

a) Job loss and job search --- This application shall provide information on entitlement, benefits, provide job bank searches derived from the Office of Personnel Management (Macon, GA) data base, list qualifications for jobs when available, and provide for applying for a job and unemployment benefits. It shall list the providers of different types of job help services available to the user, local state, and federal. The user shall have the opportunity to request that information packets be mailed to him/her from the appropriate service providers.

b) Retirement --- This application shall provide information on entitlement, benefits, and shall provide applying for the qualified benefits. It shall list the providers of different types of retirement help services available to the user, local state, and federal (VA, SSA, Railroad, etc.). As part of this application, the user shall have the opportunity to request that information packets be mailed to him/her from the appropriate service providers.

c) Health issues --- This application shall provide information on, and the entitlement and benefits related to different health issues and concerns (e.g. pregnancy, maternity, AIDS, aging, cancer, high blood pressure, etc.), and shall provide applying for the qualified benefits. It shall list the providers of different types of health services available to the user, and connect the user to these providers local state, or federal. As part of this application, the user shall have the opportunity to request that information packets be mailed to him/her from the appropriate service providers.

d) Moving --- This application shall provide information on the issues related to moving to another area. It shall include procedures on how and where to get information about an area, schools, job opportunities, climate, cost of living, demographics, medical facilities and services, retirement homes and services, etc. As part of this application, the user shall have the opportunity to request that information packets be mailed to him/her from various chambers of commerce and service providers.

e) Educational opportunities --- This application shall provide information on what schools are available in an area from child care on, up through university education. Descriptions and pictures of the school, requirements, representative costs, available financial aid (e.g. VA, scholarships), location, etc. shall be provided. As part of this application, the user shall have the opportunity to select institutions from which information packets be mailed to him/her.

f) Birth or death --- This application shall provide information on the issues and procedures related to a birth or a death. The user shall be provided with information and the opportunity to file the appropriate papers with agencies, courts, service providers, etc. For example, on the birth of a child the user shall be able to notify INS, request a Social Security card, etc. On the death of a family member, the user shall be able to notify the services providers, retirement providers, get tax information, etc. the person was involve with before her/his death. The user shall be provided with a check list as a memory aid, and provided with a list of the papers needed for submission to courts, city clerk, and service providers when appropriate. The user shall also be provided with the opportunity to apply for survivor's benefits when appropriate.

g) Buying or selling a house --- This application shall provide information on the issues and procedures related to buying or selling a house. Some of the same information shall be provided as in the "moving" category. In addition, legal, tax, mortgage, VA loan guaranty, and other

relevant issues shall also be covered.

h) Social services --- This application shall provide information on the issues and procedures related to the user's needs for social services. This application is more broad than the above "health issues" category and shall interlock with it when health issues are dealt with. This category shall include housing needs, emergency cash benefits, aging, disability and diversity issues.

B.2.4 Kiosk Presentation Development and Support Services

In addition to providing the presentation software for the kiosk systems, the selected contractor shall also supply multi-media presentation development and support, facility, personnel, software tools, and other development and production services during the performance of this contract.

It is anticipated that close consultation and intensive interaction will be necessary between the presentation developers and their "knowledge base" suppliers in the individual agencies. A facility and the availability of presentation development personnel very familiar with participating agencies is, therefore, considered to be a fundamental requirement for a successful kiosk presentation development program.

At any time that the USPS presents to the contractor changes to specifications detailing application requirements which are to be fulfilled under this contract, the change order document will specify all special review and testing to be conducted prior to acceptance of the work performed, and the parties responsible for special testing and review prior to acceptance of the completed task.

B.2.4.1 Facilities

The contractor shall provide a facility, or facilities in the greater Washington, DC. area for performing the presentation development and support, integration, and testing of the kiosk systems as a minimum.

B.2.4.2 Multi-media Hardware and Software Resources

The contractor shall provide and maintain for the period of this contract at the above named facilities, complete multi-media development and supporting hardware, software, and documentation which shall include but not be limited to:

- a) All hardware, software drivers, libraries, and utilities used to prepare and execute the presentation software.
- b) All compilers, linkers, interpreters, editors, and debuggers used in development, test, and support.
- c) All special purpose development environments, multi-media authoring tools, test-bed tools, and other unique and essential development software and hardware. Where appropriate, applications

related to Internet access, or intending to provide the look and feel of Internet, shall be developed using "Mosaic."

d) All hardware and software necessary to capture and digitize video and audio materials, edit these captured sequences, compress the results onto digital storage media for the kiosk, and integrate these materials with supporting graphics for presentation on the kiosk.

e) Video and audio production facilities for the purpose of creating video and audio materials for use in presentations.

B.2.4.3 Personnel --- Multi-media Presentation Development

Sufficient qualified personnel shall be available at the above described facility with the following expertise to perform the requirements of this contract. This requirement does not, however, imply that each and every person will be required to be available all the time during the performance of this contract. In fact, it is expected that at any one time, work will be performed by a small team, or teams, of people with various expertise. People of different expertise will then rotate in and out of this team as the program progresses. It is also expected that some people will have expertise in several of the required areas and will contribute in all of those areas.

a) Functional Analyst -- person knowledgeable in all of the capabilities and limitations of the kiosk system who shall support the USPS and other Governmental entities in the analysis and design of new and improved kiosk applications and functions.

b) Systems Programmer -- person familiar with all features and functions of the kiosk microprocessor subsystem and its Operating System software, capable of writing or modifying device drivers and system utilities to support the desired multi-media functionality within the kiosk system.

c) Graphic Artist and Designer -- person with a proven track record, experienced; responsible for developing the look and feel of the kiosk presentations; skilled and responsible for directing the efforts of presentation development personnel.

d) Presentation Development Personnel -- persons experienced in the use of specialized development tools such as multi-media authoring systems, and who are experienced in story boarding, scripting, talent casting, production, and editing; who shall direct and execute the multi-media and video presentations.

e) Configuration Management Specialist -- person skilled in the discipline of hardware and software configuration management and control. He/she shall perform the duties associated with managing the change process for presentation software and for tracking the software distribution to the field. He/she shall also be responsible for maintaining the version history and inventory (data base) of scripts, visuals, audio, software, etc. used in the presentations.

f) Presentation Quality Assurance Specialist -- person skilled in the discipline of testing and

quality assurance for multi-media software, including: screen design, proofing voice overs, proof reading and spell checking text, checking sound levels and design, etc. He/she shall perform the duties associated with software test design, execution, and error correction for kiosk software. He/she shall also perform the software integration testing of software elements developed by participating contributors for inclusion on the common kiosk platform.

g) Knowledge Base Specialist -- person skilled in finding and developing the agency and service provider data and information required for a presentation. He/she will research information and will interact with the content providers at the various agencies to obtain the information required to develop the presentations.

h) Clearance Rights Specialist -- person with experience with copyright law and entertainment law, talent release forms, and publication rights. He/she shall maintain an inventory of the items which fall into the various intellectual and data rights categories and shall perform the duties related to meeting technical and entertainment union requirements including payment processing.

i) Language Specialist(s) -- person(s) skilled in scripting and translating content into a target language or arranging for and supervising such efforts.

j) Miscellaneous Personnel -- the respondent shall propose additional personnel categories as required to effectively support kiosk development for future requirements. New categories may be added to this area upon mutual agreement between the USPS and the contractor if required after contract award.

k) Multi-media Director -- the line manager with hands-on responsibility and authority for the development and production of the presentation software.

B.2.4.4 Additional Kiosk Presentation Development and Support Services

In addition to preparing the presentations for the Phase I kiosks, the contractor shall be prepared to furnish additional presentation development and support services upon modification to the base contract. The requirements for these presentations will be specified to the selected bidder after contract award, during the performance period of this contract, on an as required basis.

B.3 Network Support Requirements

Kiosk station functions shall be supported by data, information, and transactions communicated to and from various agencies and service providers via a network. Servicing the network connection, transaction processing, and operating and managing the kiosk stations shall be the task of the "Transaction and Service Manager."

The contractor shall provide the Postal Service with the hardware, software, and personnel to perform the required services to manage the operation of the kiosk stations. Some of the requirements may only be satisfied by writing specific application software packages, others may be satisfied by purchased COTS software. In either case it shall be the contractor's responsibility to design, test, and provide the integrated "Transaction and Service Manager."

A recommended solution providing the same or better functionality, that is more cost effective, or a better technology than that described below, will be favorably considered. The offeror shall, however, provide in the proposal a detailed description of the solution, and shall describe in detail how this solution benefits the project.

B.3.1 Transaction and Service Manager

The transaction and service manager functions may be performed by a centralized "mainframe", "mini", or network computer and software in conjunction with the Application Maintenance Workstation. All communications from each kiosk station shall pass through the transaction manager device or software which shall occupy the logical "hub" position in the network configuration. The transaction manager shall determine which agency or service provider the transaction is destined for, and shall make the appropriate protocol conversion and file transfer. Response transactions from agency or service provider computers shall be routed to the transaction manager device or software by the network, and from there forwarded to the originating "client" kiosk station. The kiosk stations shall communicate to their network connection utilizing the TCP/IP protocol suite.

The Transaction and Service Manager must be capable of running real-time applications and data base programs working with data stored on this device or elsewhere on the network.

The bidder shall provide in the proposal, a plan for incremental upgrading of the Transaction and Service Manager to provide a potential of 100,000 connections including over a thousand kiosk stations and other potential network users as well as a many agencies and service providers on the local, state, and federal level.

B.3.1.1 Transaction and Service Manager Functions

The Transaction and Service Manager shall:

a) receive data from the kiosk stations and direct it to the appropriate agency's host computer. If an agency's computer is unavailable, or the transaction is scheduled for "batch" processing, data from the kiosk stations shall be stored until the target host becomes available or until the time of the scheduled batch transmission. The software shall provide the necessary data conversion function between the kiosk stations and the connected agency or service provider. It shall convert the agency data formats to that which are compatible for use in the kiosk stations. Likewise, transaction requests from kiosk stations shall be converted to the appropriate formats for processing by agencies.

b) maintain databases of updated information, or obtain from agency databases updated information in a batch mode which shall then be processed and distributed to individual kiosk stations as appropriate for the station's location. These updates shall take place at a frequency designed to keep kiosk resident data current. Maintaining a kiosk resident job-bank database current with updates derived from the agency feed is an example of such required updating service.

- c) provide the operational, system management, and kiosk station service applications. These include: 1) the maintenance management software; 2) the kiosk stations' activity files and report generation software; 3) the user survey files; 4) security and access management; 5) software update version control and history files; 5) payment and bank card transaction logs and files; and 6) kiosk system operations monitoring software and displays.
- d) manage and provide for accumulating the appropriate charges to agencies and service providers and perform the "billing" process. This application may require maintaining many different "charge" models and maintaining the data required to support these charges.
- e) monitor data which is maintained and stored by agencies in the system for use by the kiosk stations;
- f) provide the access and communications to banking networks to accomplish bank card transactions;
- g) provide access and communications to Internet as required;
- h) shall provide the necessary safeguards to ensure the security of the communications and passwords processed through the system. The offeror shall describe in detail the protection provided by the proposed system.

B.3.2 Processor Requirements

No proprietary processor technology shall be utilized in the system. All components shall be available from at least two separate and credible manufacturers. The transaction manager processor shall be designed using open technology that will allow the USPS to purchase "off the shelf" add on cards and peripherals as future needs arise. Proprietary technologies with limited availability will not be acceptable.

B.3.2.1 Operating System

The Operating System software which is supplied for the transaction manager shall be a multi-tasking and multi-threading Operating System capable of executing multiple concurrent tasks without detectable delays.

All software drivers, libraries, communication modules, etc. which are necessary to extend the functions of the Operating System in order to support the full required functionality of the processor shall be supplied. This software shall be fully integrated with the Operating System and be fully accessible to support all required functions of the transaction and service manager.

Only such Operating System technology which is found in standard business applications shall be utilized in the kiosk system. Operating System software for the transaction and service manager shall be supported by at least two separate and credible sales and service vendor organizations.

B.3.2.2 Mass Storage Management

The Transaction and Service Manager functions shall be supported by a highly reliable mass storage subsystem which shall provide automatic back-up and other security provisions for the resident data.

B.3.3 Power Management Requirements

B.3.3.1 Surge Protection

Surge protection shall meet the requirements of:

IEEE Standard Guide on Surge Voltage in Low Voltage AC Power Circuits, Final Draft, dated 2 August 1980.

The equipment delivered to the USPS shall be equipped with power protection in the form of industry standard surge suppressor capable of protecting the equipment from interruptions in service due to electric transients found in typical light industrial electrical service power. In addition, these surge suppressor shall protect the equipment from damage due to spikes or surges in the electrical power supplied.

B.3.3.2 Battery Backup Power

Equipment required to provide services to the kiosk system shall be supplied with battery backup power and backup battery charging system. Upon failure or brownout of normal external power, the battery backup shall prevent any interruption of processing until an orderly shutdown has been achieved. The battery backup power system shall notify the controlling processor through an RS232 serial port connection or similar mechanism that a power failure has occurred.

The battery backup power system shall provide to the equipment sufficient power to execute an orderly shutdown of all functions, to include at a minimum:

- a) Completion of any transaction receipts in an expeditious and fully correct manner.
- b) A signal to any attached kiosks that no further transactions should be sent to the Transaction and Service Manager.
- c) Flushing and completion of all file I/O, database "commits", index updates, and telecommunications exchanges.
- d) A pro-active network or dial-out modem communication attempt to advise the maintenance organization of this outage.
- e) Orderly closing of all files, databases, and telecommunications connections.
- f) Orderly "shutdown" of the controlling processor's operating system.

The controlling processor shall automatically "reboot" and return to service in unattended fashion upon restoration of external power.

B.3.4 Network Communications Requirements

The USPS plans to serve as its own network and systems integrator for the Kiosk system network. The Kiosk stations and the Transaction and Service Manager shall communicate through a network connection as described below. Integration and connection of each Kiosk station into the network will be determined individually for each station depending on the location of the station and the available network connection. As a consequence, the communication interface installed in Kiosk stations may vary according to location and the networking requirements.

The USPS plans to integrate the Kiosk stations into an existing routed network which supports TCP/IP; therefore, the offeror's proposal shall meet this requirement. However, should the vendor elect to offer an alternative network solution, they may do so. The alternate shall equal or exceed the stated requirements and the offeror shall provide a detailed justification. The USPS will evaluate the alternate and determine which is in the best interest of the Postal Service. Network integration strategy for the Kiosk stations may consist of:

- Utilizing a Value Added Network (VAN), or
- Dedicated connectivity to the Postal Routed Network (USPS - TCP/IP based network), or
- Dialing into the Postal Routed Network, or
- Some combination of the above.

B.3.4.1 Telecommunication Requirements -- Mandatory

The Kiosk stations and the Transaction and Service Manager shall be capable of supporting several different telecommunications interfaces. All interfaces will not be required on all Kiosk stations. These interfaces shall be available and shall be installed individually as required for the intended destination of the Kiosk station. The Transaction and Service Manager shall be able to communicate with any Kiosk station regardless which interface the station is equipped with.

The Kiosk stations shall be equipped with one of the following interfaces as required:

- a) Serial analogue interface, RS 232, at speeds from 9600 to 28.8 Kbps inclusive via a 25 pin DIN connector.
- b) Serial digital interface, V.35, full duplex synchronous from 56Kbps to 1.544 Mbps inclusive.
- c) IEEE 802.3 Ethernet AUI interface.

d) IEEE 802.3 Ethernet 10Base-T interface.

e) The Kiosk stations shall support wide area network transmission rates of 9600 BPS to 1.544 MBPS (capable of providing or accepting clock at all standard rates in this range).

f) Both the Kiosk stations and the Transaction and Service Manager shall support 802.3 Ethernet standards at 10 Mbps.

B.3.4.2 Telecommunication Protocol Support Requirements -- Mandatory

Kiosk stations and the Transaction and Service Manager shall support:

a) Transmission Control Protocol (TCP) as described in Internet RFC 793;

b) Internet Protocol (IP) as described in Internet RFC 1349;

c) Internet Control Message Protocol (ICMP) as described in Internet RFC 792;

d) TELNET protocol as described in Internet RFC 854.

e) and have an SNMP agent supporting MIB I and MIB II definitions as described in Internet RFC 1213 with support for all GET commands.

B.3.5 Software Downloads

a) All software contained within the kiosk system, except for that residing in ROM, shall be accessible through a network connection to the kiosk system utilizing the TCP/IP protocol suite. Remote host systems shall be able to connect to the kiosk using TCP/IP, and shall be capable of replacing any kiosk software utilizing the File Transfer Protocol (FTP).

b) Usage of this mechanism for updating kiosk software shall be part of an integrating software configuration management plan which shall in turn be utilized by contractor personnel to control and coordinate changes to Kiosk station software.

B.3.6 Store and Forward

The Kiosk stations and the Transaction and Service Manager shall recognize a communications failure and store messages until the time communications are restored. When communications are restored, the Kiosk stations and the Transaction and Service Manager shall forward all stored messages. Notice of communication path failure shall be forwarded to a network manager device.

B.4 Demonstration Unit(s)

The contractor shall assemble, deliver and install two design (2) demonstration units representative of the design and functionality of the Pilot Test units ninety (90) days after receipt

of order. These demonstration units shall be used to test and demonstrate key issues raised in the "Benchmarking" report described below in this document, and defined in the design reviews.

The contractor shall provide the personnel, services (e.g. maintenance), and materials (e.g. printer paper) required to conduct the demonstration installations. Demonstration shall run up to thirty (30) days

As defined as a result of the hardware and presentation design reviews, these units shall as a minimum:

- a) Implement the "look-and-feel" and "cross-agency functionality" of the user interface.
- b) Implement a minimum of two (2) of the "one-stop service" applications. These applications shall include multiple service providers on the state and federal levels.
- c) Demonstrate electronic benefit transfer services related transactions.
- d) Implement the printing of forms, and the delivery of installation relevant, agency and service provider specific information.
- e) Demonstrate the appearance of the kiosk station enclosure.

Each station shall be able to run state specific applications for two (2) different (to be selected) states. Simulations, emulations, and modeling approaches may be implemented where appropriate.

B.5 Pilot Testing and Market Testing

B.5.1 Pilot Test

Phase I will include a Pilot Test, intended to debug the integrated kiosk stations and network system operations. Twelve (12) kiosk units will be built for use in the Pilot Test.

B.5.1.1 Pilot Test Plan

The contractor shall prepare a draft Pilot Test Plan for submission to the COR sixty (60) calendar days before the scheduled installation of the first prototype kiosk unit. The plan shall include a detailed set of test objectives, the data requirements, the success or failure criteria for each objective, and other pertinent requirements (e.g. personnel, operational, equipment, third party surveys, observations, etc.) to complete the test. The USPS will review the plan within fifteen (15) working days of receipt.

B.5.1.2 Personnel and Materials

The contractor shall provide the personnel, services (e.g. maintenance), and materials (e.g. printer paper) required to conduct the Pilot Test.

B.5.1.3 Pilot Test Report

The contractor shall submit a draft of the Pilot Test Report to the COR fifteen (15) calendar days after the scheduled completion of the Pilot Test. The report shall contain an evaluation of the kiosk systems with respect to each of the test objectives and make detailed recommendations for improvement where appropriate. The data and the analysis to support the evaluations and recommendations shall also be included with the report.

B.5.2 Market Test

B.5.2.1 Market Test Plan

The Market Test plan will be provided by an independent contractor who will also conduct (i.e. provide the data gathering and analysis) this test.

B.5.2.2 Personnel and Materials

The contractor shall provide the personnel, services (e.g. maintenance), and materials (e.g. printer paper) required to support the operation of the system and kiosk stations during the Market Test.

B.6 Application Maintenance Workstation

The contractor shall develop, test, and deliver a stand alone software package and workstation for maintaining and updating the resident application software and database in the kiosk stations. This workstation shall provide the capability to change, update, add, and remove: screens, screen elements, data, text, voice, etc. used in the kiosk resident presentations.

B.6.1 Application Maintenance Software

The application maintenance software (AMS), in concert with the kiosk stations' operating system and database CASE tool, shall be capable of updating, through the generation of change files, the stations information index, text files, help files, display files, display command structure, etc. necessary to update and refresh the resident presentation materials. The capability shall be provided to have the changes take place at a predetermined (programmed) time and date independent of the time of distribution of the change files.

The AMS shall be designed to be used by an individual with minimal training in the use of the software, using a stand alone, desk-top software maintenance workstation. The output of the AMS shall consist of change files which shall be recognized and implemented by the kiosk stations' operating system. These files shall be configured to be transmitted to the kiosk stations via the dial-up telephone lines from the hub. Substantial and major changes or updates shall also be capable of being distributed to stations via a diskette which will be loaded by a maintenance person.

The AMS shall provide a set of "selection" and "fill in the blank" type screens to the software maintenance person, leading her/him through the maintenance session. The maintenance screens

available in a session, the "next screen," and selections on a screen, shall be provided "automatically" i.e. determined by the software as the session proceeds, from the inputs provided by the user. The AMS workstation shall retain the unchanged version of the presentation until it is intentionally purged through a fail safe procedure, and shall provide the option to the operator to "undo" a change at any time. Tested and verified change files shall be given a change number, logged in by the AMS, and retained in protected storage.

In addition the AMS shall provide:

- contextual help for each maintenance screen,
- an on-line tutorial which shall include an interactive practice maintenance session, and
- an on-line operator manual.

B.6.2 The Application Maintenance Workstation

The Application Maintenance Workstation(s) (AMW) provided by the contractor shall include the hardware and software necessary to fully emulate a deployed kiosk station. As part of a maintenance session, the operator shall be able to "run" the changed presentation by in-putting the changes into the kiosk emulator through the same path the change files will be introduced in the field and so test, end-to-end, the results of a change.

The capability of the AMW, to edit and generate updated CD-ROM disks for stored image and video files shall depend on the design (architecture) of the kiosk station's mass storage subsystem and shall be discussed fully in the proposal.

B.7 "Benchmarking" Report

Thirty (30) days after contract award, the contractor shall deliver a report and presentation containing the results of a fact finding survey of current kiosk designs and kiosk information and service delivery programs. The contractor shall draw upon published materials, experience gained on other similar projects, experiences of his/her staff, and that of the Postal Service.

The survey shall summarize and discuss the pros and cons of different kiosk design and program approaches, and shall identify issues which require future investigation and development. Particular attention shall be focused on how different kiosk programs solve or leave untreated issues relating to information search and retrieval, filling out "forms" by inexperienced users, and authenticating the identity of the user. Pictures, drawings, promotional materials, published descriptions and case histories, etc. shall be included as appropriate to illustrate observations and recommendations. Examples shall be presented demonstrating successful "best-of-breed," unsuccessful, and controversial designs and kiosk programs.

B.8 Technical Data Package

The contractor shall prepare a Technical Data Package (TDP) containing the production Kiosk

Station and Kiosk System Specifications and the Application Requirements Document. The draft Tables of Contents of the TDP shall be submitted for approval to the COR thirty (30) calendar days before the scheduled completion of the Pilot Test. The TDP shall be submitted to the COR for comments thirty (30) calendar days after the completion of the Pilot Test.

The TDP shall specify the requirements of the kiosk system, production kiosk station hardware, software, and applications of the kiosks in sufficient detail for Phase II production kiosk station fabrication, installation, and maintenance, as well as Transaction and Service Manager and network operations. These documents shall contain sections for the appropriate deliverable software and hardware documentation.

- a) The TDP shall provide functional, performance, and fabrication or procurement specifications for all hardware and software contained within the kiosk stations and the application maintenance work station. Fabrication drawings and bills of materials shall also be included. A separate volume shall describe the Transaction and Service Manager and network operations requirements.
- b) The Application Requirements Document shall describe the requirements for the preparation of future local, state, and federal applications. This document shall describe as a minimum: 1) what information is required to be provided for each application type, 2) the preferred format for presenting the information content to the presentation developers (e.g. as a "story board" with text, published instructions or guides), 3) the file formats required for motion video, paper forms, digital graphics, maps, for on-line communications, etc.
- c) The contractor shall include in the TDP a test plan and procedures for testing kiosk station production units. This plan shall provide a detailed listing of the functions to be tested and how each of these tests are to be performed. This test shall reflect the changes made in the kiosk station hardware and software as a result of the Pilot and Market Tests and reflect requirements and specifications of the TDP.

C.0 MAINTENANCE

It is preferable that all maintenance for the prototype kiosk stations be provided by the prime contractor; however, if contractors choose to subcontract this service, it shall be done in a way that is transparent to the USPS. In no event shall the prime contractor subcontract more than one tier for maintenance activities.

Maintenance in the context of this program also includes "service" actions and providing and storing the required amount of spares. Service actions include such activities as replacing toner and paper in printers, cleaning the enclosures, etc. While it may be possible to obtain service activities locally, i.e. asking the facility manager to provide these services, it is not possible at this time to predict how many such locations may exist and where they may be.

C.1 Maintenance Options

For each and every kiosk station delivered, there shall be two distinct and separate maintenance options available to the U.S. Postal Service. The choice of utilizing a particular type of maintenance for a particular kiosk unit or installation shall be the sole right of the U.S. Postal Service, which may be exercised at the time of delivery of each device and annually thereafter.

The offeror is encouraged to submit alternate maintenance proposals to the ones described below. An alternate maintenance proposal shall provide a full description of how it benefits the project.

C.1.1 Option One - Immediate, Unlimited, On-site Maintenance

Under this option the contractor shall provide unlimited maintenance, at the facility where the kiosk station has been installed, for any and all malfunctions or failures to perform on the part of the equipment, whether hardware, software, or presentation materials, supplied to the USPS under this contract. This maintenance option shall commence on the day of acceptance of the equipment and shall remain in force for one year following that date.

This option may, at the sole discretion of the USPS, be renewed for any piece of equipment on an annual basis at a price determined at the acceptance of the first year of maintenance. This option shall also be available to the USPS as an annual maintenance renewal option on equipment which was originally purchased with one of the other maintenance options.

Maintenance relating to off-day and off-hours coverage shall be proposed by the offeror with the recognition that at some sites Sunday may be the busiest day while at other sites Sunday may be a "dead" day.

C.1.1.1 Warranty

The contractor must provide a one (1) year warranty on all parts, material, hardware, software and labor. This warranty shall commence on the date of acceptance of the kiosk system. The warranty shall extend from this date for a period of no less than one (1) year. Every attempt shall be made by the contractor to obtain the best possible warranty conditions for any software

and hardware purchased or leased for this contract. All such warranties shall also commence from date of installation of the specific (identified by serial number) device. These warranties shall then become an integral part of the general warranty provided by the contractor.

Unlimited technical assistance and consultation shall be provided for each contractor-supplied device during the warranty period for purposes such as installation, configuration, trouble-shooting, reconfiguration, de-installation, etc. Such assistance shall include but not be limited to, telephone consultation, on-site visits, and repair correspondence.

Acceptance period of the kiosk system shall consist of a period of thirty (30) days of operation with no failures. This period is to begin immediately after the unit is installed and fully operational.

C.1.1.2 Remedial Maintenance

The Contractor shall provide remedial maintenance upon notification by USPS (or other participating agency). Upon notification the contractor must be on site within four (4) hours during business hours and by 7 am next morning should the failure take place after business hours. Contractor's maintenance personnel must complete repairs within four (4) hours after arrival. If repair is not accomplished in this time frame, the contractor shall grant a credit to the U.S. Postal Service in the amount of fifty percent (50%) of the monthly maintenance charge for that unit. Necessary spare parts shall be on hand to expedite the repair. A single point of contact must be provided for all USPS (or other participating agency) personnel, and this contact shall at all times be available through a single nationwide toll-free "800" number.

C.1.1.3 Liquidated Damages

For any kiosk station supplied to the USPS which fails to perform to the point of requiring contractor personnel to make on site repairs at least twice within any six (6) month period, the contractor shall replace the subject kiosk station or component at no cost to the U.S. Postal Service. If the unit or component is not replaced within twenty-four (24) hours after notification to the contractor by the USPS, the contractor must reimburse the U.S. Postal Service in accordance with the "Liquidated Damages" clause in the contract.

C.1.2 Option Two - Contractor's Alternate Maintenance Option

The contractor shall describe a timely and effective alternate maintenance option to the one described above for providing maintenance service to the kiosks installed for Pilot Testing.

C.1.3 Kiosk System Maintenance

The contractor shall provide unlimited, immediate maintenance of the complete Transaction and Service Manager equipment, software, and peripherals installation. This maintenance shall commence on the day of acceptance of the equipment and shall remain in force for one year following that date. Acceptance period of the kiosk system shall consist of a period of thirty (30) days of operation with no failures.

The Contractor shall provide remedial maintenance upon notification by USPS. Upon notification the contractor must be on site within two (2) hours. Contractor's maintenance personnel must complete repairs within one (1) hour after arrival. If repair is not accomplished in this time, the contractor shall grant a credit to the U.S. Postal Service in the amount of fifty percent (50%) of the monthly maintenance charge for the installation. Necessary spare parts, diagnostic equipment and software shall be on hand to expedite the repair. A single point of contact must be provided for all USPS personnel, and this contact shall at all times be available through a single nationwide toll-free "800" number.

C.1.4 Preventive Maintenance

Contractor shall define a preventive maintenance plan as part of the proposal and shall provide any preventive maintenance that may be required on an as needed basis to all kiosks delivered under this contract, or any extensions (i.e. additional deliveries) of this contract..

C.1.5 Termination of Maintenance

The U.S. Postal Service may terminate the maintenance contract in its entirety or in portion when there are ten (10) catastrophic failures per hundred (100) installed kiosk stations in a three (3) month period. A catastrophic failure is defined as the total loss of data transmission capability, or out of service condition lasting 48 or more consecutive hours for a station. The U.S. Postal Service shall incur no costs for equipment de-installation and transportation covered under this paragraph. The U.S. Postal Service shall be indemnified for any loss of monies and costs for retrofitting equipment, finding a new maintenance contractor, etc. due to the above described conditions.

C.1.6 Maintenance Management

As a basic requirement the contractor shall take complete and full responsibility for all duties such as inventory tracking, configuration management, equipment database maintenance, change recording, etc. which are necessary for the total performance of the two maintenance options.

The contractor shall at all times maintain an electronic database which shall contain for each piece of contractor supplied equipment the following information as a minimum:

- a) The current and all past locations at which this equipment is installed with dates.
- b) The current and all previous equipment configurations to include make, model, serial number, optional hardware, revision levels, and attached devices with dates.
- c) The current and all previous software configurations and revision levels active on this equipment with dates.
- d) A complete description of every reported trouble incident for this equipment, with resolution and dates.

e) The current and all previous maintenance options which apply to this equipment, with dates.

This database shall be updated within no more than two working days for any changed information, except for item (d) trouble incidents, which shall be updated on a near-real-time basis. Dial-in access to this database shall be provided to USPS authorized personnel. All information within the database shall be accessible to authorized USPS personnel through any valid combination of device make, model, serial number, and location.

All duties involved with timely collection and maintenance of the information for this database shall at all times and in every manner remain the burden of the contractor.

The contractor shall supply monthly maintenance status reports, in electronic form, as updates to a database file or spreadsheet, to the USPS COR and to the respective officials of other participating agencies. This report shall show all maintenance activities, as well as all configuration changes and deployment status for each and every kiosk system supplied by the contractor to the U.S. Postal Service or other Government entity.

C.2 Kiosk Station Effectiveness Level

Any kiosk station shall operate at an effectiveness level of ninety-nine point five percent (99.5%) when averaged over each one (1) month period. The kiosk shall be capable of operation, when installed, twenty-four (24) hours a day, seven (7) days a week. In the event that any kiosk system drops below ninety-nine point five percent (99.5%) for two (2) consecutive months, the contractor shall replace the subject kiosk system with an identical but properly functioning unit at no cost to the U.S. Postal Service.

If the unit is not replaced within twenty-four (24) hours after notification to the contractor by the USPS, the contractor must reimburse the U.S. Postal Service in accordance with the "Liquidated Damages" clause reflected in a kiosk delivery order or as specified as part of this contract.

The effectiveness level is calculated as:

$$\frac{[(\text{Operational minutes per month}) - (\text{Minutes downtime per month})]}{(\text{Operational minutes per month})}$$

Downtime includes all the time the kiosk was not operational including the time it took to effect repairs but excluding the time between notification and 7 am if the failure took place after business hours or off-days.

Limited loss of functionality such as out of paper condition is not counted as downtime until an agreed on period of time has elapsed. For example: in a particular facility it is agreed, at the time of installation, that printer paper must be replenished within four (4) hours after the receipt of the out of paper signal during business hours and by 11 am next morning otherwise. Downtime will be accumulated starting when these time limits have been reached.

C.3 Maintenance Plan

The contractor shall prepare and submit to the COR a Maintenance Plan for comments and approval thirty (30) days prior to the scheduled date of the Pilot Test. The Maintenance Plan shall include but not be limited to:

- a) A discussion of the appropriate maintenance philosophy with respect to repair vs. replace practices.
- b) A determination of the appropriate stocking levels for spares and a discussion of how they were arrived at.
- c) The plan for staging spares. This shall include the list of on-site spares and consumables and the list and quantity of depot spares.

C.4 Maintenance Documentation

The contractor shall prepare and submit to the COR a draft copy of the Maintenance Documentation for comments and approval thirty (30) days prior to the scheduled date of the Pilot Test.

The contractor shall provide digitally stored documentation for on-site maintenance and service. The digitally stored maintenance and service manual shall be available via the kiosk station's microprocessor and display. The manual shall provide both a tutorial as well as a quick reference capability. The manual shall contain:

- a) A detailed troubleshooting section consisting of a "tree" of easily performed go/no-go procedures leading to the isolation of the suspected equipment.
- b) Diagrams and graphics showing replacement and other procedures.
- c) Step by step instructions for carrying out the suggested diagnostic procedures.

A hard copy of the troubleshooting guide shall also be attached to a convenient, easily visible, inside surface of the kiosk station for use when the microprocessor or the display are not available.

D.0 **INSTALLATION REQUIREMENTS**

The contractor shall install and test the proposed kiosk system hardware and software described in this SOW. The communications network will be provided by the Postal Service. The contractor shall furnish any and all equipment or parts necessary for proper installation and operation of the kiosk stations and kiosk system. The technical proposal shall list all equipment auxiliary items and parts necessary for the proper operation of the kiosk system.

D.1 Installation Plan

The contractor shall propose an installation plan which shall describe the installation steps for the proposed kiosk system. This plan shall be updated thirty (30) days prior to the scheduled date of the installation of the first delivered kiosk system.

D.2 Kiosk Station Installation

The contractor shall perform all installation tasks. Installation shall consist of the site survey, delivery, installation, and the acceptance testing of the kiosk station. The USPS may, however, elect to install some of the individual kiosk stations. The contractor shall provide reusable shipping containers for the secure shipment of kiosk stations.

As part of the site survey the contractor shall ascertain that power and communications are available as required, that the site is suitable in all particulars, and that installation may proceed as scheduled. It shall be the contractor's responsibility to notify the appropriate parties in sufficient time to effect remedial action if the site survey uncovers difficulties. At the conclusion of the site survey, the contractor shall certify that the site is ready for the installation.

D.3 Transaction and Service Manager Installation

The contractor shall perform the installation of the Transaction and Service Manager. Installation shall consist of the delivery, installation, and the acceptance testing of the system hardware and software.

E.0 DELIVERABLES

Deliverable items are described throughout the body of this SOW. The section below contains most if not all of the deliverables; it may add some and clarifies others. The offeror is, however, required to propose and deliver all the deliverables described in the body of the SOW as well as the section below. The contractor is solely responsible to assure that he/she meets all the requirements of this SOW. The deliverables pertain both to Phase I and Phase II of this procurement.

E.1 Kiosk System -- Kiosk Stations

E.1.1 Kiosk Stations

The contractor shall design, fabricate, assemble, test, and deliver the requested quantity of complete kiosk stations including enclosure, all hardware, software, peripheral equipment, and presentation software necessary to meet the requirements of this SOW.

E.1.1.1 Pilot Test Kiosk Stations

Ten (10) kiosk stations shall be delivered and installed at specified field locations, some in the greater Washington, DC area, some elsewhere within the continental United States for pilot testing.

One (1) complete kiosk shall be delivered and installed in the USPS Headquarters building. This unit shall reflect in all particulars the units in the field, including connection to the kiosk network.

One (1) complete kiosk shall be retained at the contractor's facility and used as an aid in diagnosing problems with kiosk units installed in the field. This unit shall also reflect in all particulars the units in the field, including connection to the kiosk network.

The first kiosk system shall be available for installation at a designated Pilot Test site no later than six (6) months after the award of this contract.

The last kiosk system shall be available for installation at a designated Pilot Test site no later than seven (7) months after the award of this contract.

E.1.1.2 Market Test Kiosk Stations

One hundred (100) kiosk stations shall be delivered and installed at specified field locations within the continental United States for market testing. These kiosk station shall be available for installation at designated Market Test sites no later than eleven (11) months after the award of this contract.

E.1.2 Kiosk Station Configuration

Each kiosk station shall include the following equipment and software as specified above and modified as the result of the various design reviews:

- a) Enclosure
- b) Processor equipment complement including: operating system, mass storage subsystem, I/O connectors and interfaces, maintenance keyboard, application maintenance software, etc. as required to provide full functionality
- c) Touch/display screen
- d) Bank card reader
- e) Smart card reader
- f) Printer and dispenser
- g) Communications subsystem (e.g. high speed modem, TCP/IP protocol, appropriate interface, etc.)
- h) User keyboard if required after design review
- i) Power management subsystem
- j) Application/presentation software suite
- k) Utility software suite comprised of the "smart search" capability, context related help, data base engine and manager, user input tracking, user survey, etc.
- l) Customer detection device

E.1.3 Bench Test Kiosk Station

One (1) complete bench test kiosk station shall be assembled and retained at the contractor's facility and used as a test unit for modifications and changes in hardware as well as software.

E.1.4 Demonstration Kiosk Stations

The contractor shall deliver two (2) demonstration kiosk stations.

E.1.5 Additional Enclosure Designs

The contractor shall deliver to the USPS the additional enclosure designs described in this SOW. These designs shall be delivered fifteen (15) calendar days after receipt of the USPS comments from the design review. These designs shall be delivered as color print-outs as well as computer graphics and Postal compatible CAD files.

E.1.6 Software Maintenance Workstation

The contractor shall deliver six (6) months after award of contract one (1) stand alone software, workstation, and documentation package, for maintaining and updating the resident application software and database in the kiosk stations. This system will be released back to the contractor for use during the Phase I development effort.

E.2 Transaction and Service Manager

The contractor shall design, deliver, install, integrate, test, and operate the Transaction and Service Manager with the appropriate network to service the kiosk stations, service provider, and agency connections.

E.3 Presentations

E.3.1 Presentation Material and Software

The contractor shall design, produce, integrate, test, and install complete presentations into the deliverable kiosk stations. These presentation shall meet all the requirements of this SOW.

E.4 Training -- Optional

E.4.1 Training

The contractor shall provide complete training of USPS personnel in the installation, operation and maintenance of the proposed systems.

The contractor shall offer two (2) of these courses, one within ten (10) business days of delivery of the first Phase II kiosk, and one within thirty (30) calendar days of official request by USPS. The contractor shall agree to a class size of fifteen (15) persons maximum per class.

All training courses or course purchase credits acquired as part of the software or hardware purchased under this contract shall be passed on to the USPS and shall be provided in addition to and not take the place of the training requirements described below.

The kiosk training shall take a minimum of two (2) days and shall include:

E.4.1.1 Kiosk System Operation

The kiosk system operations course material shall include a general description of and instruction in the operation of the proposed Transaction and Service Manager hardware and software. The course shall also provide USPS personnel with a basic knowledge of trouble shooting techniques.

E.4.1.2 Kiosk Station Operation

The kiosk station operations course material shall include a general description of and instruction

in the operation of the proposed hardware and software included in the kiosk station. The course shall also provide USPS personnel with a basic knowledge of trouble shooting techniques.

E.4.1.3 Hardware Maintenance

This material shall specifically address issues related to the maintenance of the proposed kiosk systems. This course shall include classroom instruction as well as "hands on" laboratory instruction. The contractor shall agree to certify personnel completing this course. This certification shall allow USPS personnel to install and perform emergency maintenance on all contractor supplied devices, without penalty. Training shall be provided in the use of the documentation delivered with purchased materials.

E.4.1.4 Software Maintenance

This material shall specifically address issues related to the software maintenance of the proposed kiosk system and kiosk stations. These courses shall provide classroom and laboratory instruction on how to prepare, load, and maintain software releases and changes.

a) One training course shall fully and specifically instruct USPS personnel the way in which software would be installed into the Transaction and Service Manager and the kiosks connected to a network. This course shall also fully and specifically instruct USPS personnel in all other relevant issues such as addressing, database configuration, operation of peripheral devices, diagnostics, etc. as they relate to the kiosk stations and Transaction and Service Manager hardware and software. In addition, the course shall include training in the use of the documentation delivered with the purchased hardware and software. It is estimated that a training course designed to cover the above stated material may require three (3) to five (5) days of instruction and practice.

b) A three (3) day training course shall also be provided for up to ten (10) participants in the operation of the kiosk station software maintenance workstation. This course shall be targeted for non programmers with no familiarity with authoring languages and multi-media presentations, but with familiarity with "Windows", or similar type applications. The course shall provide the appropriate hands-on and theoretical training necessary to become proficient in the operation of the workstation and to be able to accomplish software application changes and updates.

E.4.2 Training Location

The offeror shall include all travel and lodging costs in the training pricing. It is desirable that the training be conducted at the National Information Systems Support Center in Raleigh, NC. In the event that this training cannot be held at the specified location, the offeror shall specify the location of its training facility. If the training is to be held at the contractor's location, the class shall be limited to USPS personnel.

E.4.3 Schedule of Training

A training schedule shall be provided with the proposal.

E.4.4 Training Plan

The offeror shall submit a training plan and draft syllabus outlining the proposed training program in the proposal. The final plan and syllabus shall be submitted for approval by the COR forty-five (45) days prior to the proposed commencement of the first training session.

E.4.5 Training Documentation

The contractor shall provide training documentation, as well as equipment hardware and software documentation to all USPS personnel who attend any contractor-supplied training. All documentation provided to students shall become property of USPS. The USPS shall have the right to reproduce as many copies of any documentation supplied as the U.S. Postal Service shall deem necessary for internal use both for evaluation, and for deployment should the offeror be selected for contract award.

Training documentation prepared by the contractor shall be provided in electronic as well as paper form.

E.5 Maintenance

E.5.1 Maintenance and Service

The contractor shall provide the maintenance and service specified in this SOW as selected for each of the installed kiosks as well as the maintenance required for the Transaction and Service Manager installation.

E.5.2 Maintenance Plan

The contractor shall deliver the Maintenance Plan as specified in this SOW.

E.5.3 Maintenance Documentation

The contractor shall deliver the Maintenance Documentation as specified in this SOW.

E.6 Facilities

The contractor shall maintain, for the duration of this contract, the facility or facilities required for the design and production of the presentation materials specified in this SOW. In addition the contractor shall also maintain a facility for hardware assembly, integration, and testing, as well as system software generation and testing. All of these facilities may in fact be combined in one location or dispersed.

E.7 Personnel

The contractor shall provide the services of the personnel as required to perform the necessary tasks for this program.

E.8 Design Reviews

Design reviews are considered to be formal deliverables. The contractor shall prepare and deliver to the COR twelve (12) sets of the appropriate documentation in preparation to each design review so as to acquaint the participants with the goals and issues of the review. This documentation shall be delivered five (5) working days before the scheduled date of the review. Design reviews shall be conducted at U.S. Postal Service Headquarters and the contractor's Washington facility, in turn, by contractor personnel.

E.8.1 Hardware Design Reviews

The contractor shall schedule, conduct, and document formal hardware design reviews as part of this contract. These design reviews shall cover all the requirements specified by this SOW. Separate reviews shall be conducted to cover:

- a) Kiosk station design; including: enclosure, processor, mass storage, display, ergonomics, operating system, growth potential, estimated production cost, safety, security, etc.
- b) Kiosk system and network services design; including: network services, capabilities, hardware and software functionalities, etc.
- c) Production kiosk station design and specification; including: changes from Market Test units, estimated production costs, etc.

E.8.2 Presentation Design Reviews

The contractor shall schedule, conduct, and document the result of the following formal design reviews as part of this contract. Design reviews may be scheduled to be conducted one after the other within a one or two day session if the program schedule permits it. Sufficient time shall be allowed, however, to present and discuss the design in detail.

- a) Design of common kiosk presentation functions and requirements: contextual help, information and word search, transaction tracking, "grabber", integrated introduction, citizen survey, etc.
- b) "Look and feel" style elements and treatment concepts including: colors, text fonts, use of audio and music, navigational aids, screen controls, display ergonomics, general guidelines for presentation design, etc.
- c) Kiosk station database and mass storage system design review including: information retrieval and updating scheme; selection of text, graphics, image retrieval and data base "engine;" selection of the data base maintenance tool set; mass storage hardware and storage architecture; etc.
- d) Review of the preliminary concept and treatment plan for each of the applications, presentations, and transactions.
- e) Review of the story-boards and the design of the key screens for each of the applications,

presentations, and transactions.

f) Review of the information content of each of the applications, presentations, and transactions.

g) Final review of the "finished" applications, presentations, and transactions integrated into the kiosk station, prior to release for functional testing.

E.8.3 Database Design Review

The contractor shall schedule, conduct, and document the result of the following formal design reviews as part of this contract. Design reviews may be scheduled to be conducted one after the other within a one or two day session if the program schedule permits it. Sufficient time shall be allowed, however, to present and discuss the design in detail.

a) Data model and data dictionary review

b) Data base design review

c) Data base maintenance

E.9 Documentation

E.9.1 Documentation

Specific documentation requirements are described in the appropriate sections of this specification. In general, however, the appropriate documentation which is available off-the-shelf, shall be provided for all hardware and software purchased for the performance of this contract. This includes all components of the kiosk systems including programmer's manuals, hardware operating guides, maintenance manuals, etc. for computer, interface cards, display, memory system, etc.

All documentation generated explicitly for this project shall be provided in electronic as well as paper form. If documentation is purchased for this project and is available off-the-shelf in electronic as well as paper form, both the electronic and paper formats shall be purchased and delivered.

E.9.2 Intellectual Property and Data Rights

The contractor shall deliver to the U.S. Postal Service three (3) paper copies and one (1) electronic copy of the documentation listed below.

The contractor shall deliver to the USPS at the conclusion of Phase I of the contract:

a) a comprehensive listing of all materials delivered under each Intellectual Property and Data Rights categories;

b) all COTS media and documentation as well as the appropriate licenses for all Category (b) items delivered as part of this contract; and

c) all "original" materials such as art-work, graphics, video and sound tapes, masters, scripts, story-boards, documents, source code, software, etc. used in the development and generation of Category (a) items.

E.10 Pilot and Market Test

E.10.1 Pilot Test Support

The contractor shall provide the personnel and materials to support a two (2) month Pilot Test effort.

E.10.1.1 Pilot Test Report

The contractor shall submit a draft of the Pilot Test Report to the COR ten (10) calendar days after the scheduled completion of the Pilot Test.

E.10.2 Market Test Support

The contractor shall provide the personnel and materials to support a three (3) month Market Test effort.

E.10.2.1 Market Test Report

The contractor shall submit a draft of the Market Test Report to the COR ten (10) calendar days after the scheduled completion of the Market Test.

E.11 Technical Data Package

Draft Table of Contents of the documents comprising the Technical Data Package shall be submitted for approval to the COR thirty (30) calendar days before the scheduled completion of the Pilot Test.

The Technical Data Package shall be submitted to the COR for comments thirty (30) calendar days after the completion of the Pilot Test.

E.12 Presentations and Agency Liaison

The contractor shall provide presentations to agency management, liaison, and support services as required for the smooth running of this project. It is expected that a considerable amount of work-hours and materials will be expended in this general category. Presentations may include demonstrations with actual hardware and software, videos, and other graphics. Agency liaison may include trips to meet with stake-holders, observe operations, and attending meetings to acquaint agency managers with the goals of this project.

E.13 Technology Refreshment

Throughout the effective life of this contract it shall be the responsibility of the contractor to propose modifications to the requirements spelled out in this SOW and this contract which may be necessary or desirable in order to allow the USPS to enjoy the benefits of advancements in technologies related to kiosks and interactive multi-media systems. The U.S. Postal Service will evaluate all such proposals and may at its sole discretion choose to incorporate or not incorporate any suggested modifications based upon their benefit to the Service to the Citizens program.

F.0 FUTURE REQUIREMENTS

The following requirements represent additional kiosk features and capabilities which may be required to be incorporated into the kiosk station's functionality in the future. The design of the basic kiosk shall reflect awareness of these requirements and shall be such as to provide an easy path for providing these requirements. For this reason, each respondent to this RFP requested to describe in some detail the means by which each of these optional requirements will be enabled or facilitated in the proposed kiosk station design and how they may be fulfilled should this become a requirement at some future time. The respondents shall also provide an estimate of cost for each option.

Creative solutions which offer ease and efficiency in the transition and upgrade process are highly desirable.

F.1 Future Kiosk Requirements

F.1.1 Dial-in Access

F.1.1.1 Dial-in Modem Access

The contractor shall describe a method whereby users at home utilizing modems hooked to PCs may access the informational content and transactional capability of the kiosk applications.

F.1.1.2 Dial-in Touch-tone Access

The contractor shall describe a method whereby users at home utilizing touch-tone telephones may access some portion or the complete informational content and transactional capability of the kiosk applications through phone accessible audio menus and word recognition software.

F.1.2 Voice Recognition

The contractor shall describe a method for integrating the recognition of speaker independent verbal commands into the menu selection process of the kiosk.

F.1.3 Video Capture

The contractor shall describe a mechanism whereby the capture, compression, storage, transmission, and retrieval of NTSC compatible video may be integrated with the deployed kiosk, and utilized for functions such as interactive video-conferencing and video mail.

F.1.4 FAX

The contractor shall describe a mechanism whereby the capability to transmit and/or receive Faxes may be incorporated into the kiosk applications.

F.1.5 Optical Character Recognition (OCR)

The contractor shall describe a mechanism whereby the ability to scan hard-copy forms, perform OCR on the contents of the form, and incorporate the contents of the form into kiosk driven transactions may be integrated into the kiosk applications.

F.1.6 Customer Input Using a Floppy Disk

The contractor shall describe a mechanism whereby the kiosk applications are capable of receiving input via user-supplied floppy disks and of incorporating the contents of the floppies into kiosk-driven transactions. No kiosk shall ever be capable of being "booted" from a customer-supplied floppy. No customer-supplied floppy shall be able to infect a kiosk with a computer virus.

F.1.7 Telephone and Video Support

The contractor shall describe a mechanism whereby the kiosk user may be provided with on-line, face-to-face, or support operator's face and voice to user's voice, support during a kiosk session using the kiosk's dial-up capability.

F.2 Postage Vending

The contractor shall describe a mechanism whereby the kiosk will be capable of vending postage either in the form of printing a "meter mark" on envelopes or through the setting of postal meters.

F.3 Remote Multi-media Applications Support

The contractor shall describe a mechanism whereby the kiosk may run multi-media applications from a remote processor. The intent of this option is to replace expensive local mass storage with shared access to a central repository of multi-media materials via leased telecommunications networks. This option would be implemented at the discretion of individual purchasing entities.

F.4 Access for the Physically Challenged

While each Phase I and Phase II kiosk shall comply with applicable sections of the Americans with Disabilities Act, additional aid may be offered in the future:

- a) When requested by the user, provide all information contained in each presentation in an "augmented" audio form for access by the blind.
- b) Provide alternate touch-screen selections for menu prompts for the blind. (An alternate audio track may, for example, request touch at the screen corners for one choice out of four alternate menu selections.)
- c) Provide all audio information in printed text form on the screen for access by the hearing impaired when requested by the user.

- d) Install a fold-out seat which provides ease of access by the elderly at some locations when specifically requested.
- e) Provide software volume control. The range of adjustment shall be provided through a volume control "slider" in a display screen. The maximum volume which can be available via the slider shall be determined by a master volume control located within the kiosk enclosure and accessible only to authorized personnel.
- f) The capability to change the font size on text displays.
- h) Provide a window in each screen where a "signer" presents information or additional text is displayed for the hearing impaired when requested by the user.

G.0 MANAGEMENT

G.1 Reporting Requirements

All Phase I reports shall be submitted both in paper, three (3) copies, and electronic form to:

Don Nacke, Development Manager (COR)
U.S. Postal Service Headquarters, Room 2140
475 L'Enfant Plaza, SW
Washington, DC 20260-0080

Phone: 202 268-4860
FAX: 202 268-4980

G.1.1 Monthly Progress Reports

The contractor shall submit a short progress report the last Friday of each month. The report shall include:

- a short description of the work accomplished and the work planned for the next reporting period for each of the major task groups of this project, e.g. kiosk station design, presentation design by each agency, Transaction and Service Manager, etc.
- progress on specific assigned action items;
- list of all active action items with due dates;
- a description of unexpected technical, resource, or personnel problems with a description of the proposed work-around and the expected impact on cost or schedule if any;
- a description of the milestones or deliverables completed in the reporting period;
- a summary of the hours spent by each contributor or team member;
- a list of materials to be purchased or expected expenses for the next reporting period;
- a cost summary of the reporting period; and
- a list of the meetings attended with agencies, vendors, consultants, etc. including minutes of such meetings. The minutes shall include the list of attenders, decisions made, and action items assigned.

During the Pilot and Market Tests, the monthly report shall also include a summary of "items of interest" as well as the user action report summaries from the kiosk stations.

G.1.2 Miscellaneous Reports

A number of different reports discussed in the body of the specification shall also be delivered during the conduct of this project. These shall include the reports documenting the results of each of the various design reviews, acceptance tests, the Pilot Test, and maintenance and service reports.

G.2 Communication

The contractor and the COR shall maintain close contact during the performance of this project. The contractor shall contact the COR at least once a week by telephone to discuss current activities and concerns. If at all practicable, these telephone contacts shall be by speaker-phone and shall include the key technical contributors as appropriate. The monthly report should not be the first and only vehicle by which the COR is made aware of the current concerns and status of the project.

The COR and other USPS representatives shall be invited to meetings with prospective hardware and software vendors, agency meetings, and to any key internal technical and project reviews.

Frequent project status review meetings shall be scheduled for the duration of the project.

G.3 Schedule and Staffing

G.3.1 Schedule

The contractor shall staff this effort to assure that it is completed within the following schedule:

	<u>Months After Order</u>
• Deliver Benchmark Report	1
• Presentation Design Review	2
• Kiosk Station Design Review	2
• Kiosk System Design Review	3
• Deliver Demonstration Units	3
• First Article Functional Test	5.5
• Pilot Test Plan Review	7
• Kiosk System Test	7
• Installation Pilot Test kiosk stations	8.5
• Completion of Pilot Test	10.5

- Start Rework 10.5
- Complete Installation of 100 Market Test Units 11
- Market Test is Completed 14
- Completion of Production Specifications 13
- Start Phase II 15

G.3.2 Staffing and Organization

This project requires the efforts of many qualified contributors of widely different expertise. This does not, however, imply that each and every contributor be available all the time during the performance of this contract. It is not expected or desired that a large team be working on this effort at any one time. The contractor shall organize the project into sharply focused tasks to be accomplished by small task teams. It is desired that at any one time, work be performed by one or two small teams of people with various expertise organized around one or two key contributors. People of different expertise may then rotate in and out of these teams as the project progresses.

The person assigned as Project Manager shall also be a key technical contributor and is expected to devote 100 percent of his/her time to this project. All contributors shall have recent, significant, hands-on experience in the task assigned to them. Titular, pro-forma assignments will not be accepted. Delegation of assignments to "junior" or "associate" personnel, even if "supervised" will not be accepted. Change of assignment or level of contribution during the conduct of this project will have to be approved by the COR thirty (30) days in advance of the proposed change. Approval will be given only if a suitable substitute is proposed or if the task requirements have changed.

G.4 Agency Liaison Support

As part of the management task, the contractor shall provide presentations to agency management, as well as liaison, and support services as required for the smooth running of this project. Presentations may include demonstrations with actual hardware and software, videos, and other graphics. Agency liaison may also include trips to meet with stake-holders, observe operations, gather materials, and attending meetings to acquaint agency managers with the goals or progress of this project.

H.0 PROPOSAL PREPARATION REQUIREMENTS

H.1 Statement of Compliance

The offerors shall explicitly state that they will or will not comply with all the requirements of the SOW. All exceptions shall be clearly identified, the deviation stated, and the rationale for the deviation provided. A statement of compliance where in fact the offer is non compliant will disqualify the proposal. Compliance in the face of technical, cost, or resource related reservations shall also be explicitly and fully discussed in the proposal.

Please be aware that it is recognized that non compliance in certain instances may convey substantial benefits and that this will be recognized as such by the evaluators. It is, however, a mandatory requirement to flag in the proposal all deviations and non compliance with the SOW.

H.2 Technical Proposal

H.2.1 Format

It is highly desirable that offerors prepare proposals in a format which facilitates the evaluation process. This may be accomplished by: a) responding to each section and subsection of the SOW in the order in which they appear in the SOW, or b) by printing the SOW requirements either directly above the response or next to the response in a two column or side-by-side pages format. Electronic copies of the SOW are provided in order to facilitate this effort. A non descriptive statement such as "will comply" as a response to requirements will be deemed unresponsive.

The above requirement should not, however, discourage the offerors from providing a summary description of their approach to this project, with the attendant benefits, in addition to the detailed technical response to the SOW.

H.2.2 Content

Using the format described above, the offeror shall describe in detail, section by section, how each of the requirements of this SOW will be met. The list below is offered as a check list for the inclusion of some key or additional items.

In the proposal the offeror shall:

- a) identify the authoring tool(s) proposed to use in the fulfillment of this contract;
- b) present evidence of the offeror's knowledge of the information/transaction needs of the public with respect to local, state, and federal government provided services;
- c) identify efficiencies possible through various kiosk station deployment scenarios;
- d) offer a technical solution which will provide the ability for users of the kiosk to gain access to certain services through the use of a "smart" card which contains identifying information as

well as personalized background data and account information;

e) describe the proposed data architecture in detail;

f) describe the proposed hardware and software complement for use in the kiosk stations and the Transaction and Service Manager. The description shall include:

- Manufacturer's model number, performance characteristics, and the functional capabilities of the hardware elements.
- Vendor's name, software title and version number, and functional capabilities of the software elements.

g) provide three (3) copies of a video tape which contains samples of recent kiosk stations and kiosk presentations produced by the offeror. It is not intended, however, to cause the generation of such a video if it does not exist already!

h) provide a list of completed kiosk related projects with the name and telephone number of a management level contact for reference;

i) describe the proposed method for implementing a "smart index" and information search capability;

j) describe the proposed method for implementing a one-stop service application such as job loss or health issues;

H.2 Program Plan and Project Schedule

The offeror shall propose a program plan showing the planned resource (labor and other) commitments over the duration of the project. The program plan shall show major milestones and start and end dates for individual tasks. If a number of facilities are involved, the proposed plan shall show what tasks will be performed in which facility.

H.3 Management Proposal

The offeror may elect to respond to the management requirements of this SOW in a section separate from the technical proposal.

H.4 Cost Proposal

A separate cost proposal shall be provided including a chart showing the resource allocations and labor categories for each task separately as well as a summary chart. Cost accrual shall be provided in AP increments for the proposed duration of the project.

H.5 Vendor Supplied Equipment Documentation

The offeror shall provide, along with the technical proposal, three (3) complete copies of all published specification sheets, brochures, technical descriptions, and other documentation for all proposed equipment, associated hardware, software, peripheral devices, utilities, etc. which describe the off-the-shelf equipment included in the offeror's proposal. Vendor documentation which is expected to be used as part of the deliverable documentation will be evaluated for quality, completeness, and accessibility for use as part of the proposal evaluation process.

This vendor documentation shall not constitute an extension or be provided in lieu of technical descriptions in the offeror's technical proposal. It is unacceptable for any offeror to extend or augment a technical proposal by reference to this documentation. (The USPS may have to reproduce as many copies of any documentation supplied as deemed necessary for internal use during proposal evaluation.)

H.6 Optional Requirements

Each respondent shall describe the means by which each of the optional requirements are enabled in the basic kiosk and how they would be fulfilled should this become a requirement at some future time. The respondents shall also provide an estimate of cost for each option if requested to be included as part of the procurement.

H.7 Personnel

The respondent shall provide Resumes for the staff proposed to address the requirements of this project. The assignment for which each person is proposed shall be clearly stated and justified. It is highly desirable for the offeror to point out specific strengths and accomplishments of the proposed personnel to contribute to this project. The list of requirements in the body of this SOW for contributors with specific skills and experiences shall be addressed directly by the choice of personnel assignments. The proposal shall contain a table where the qualifications and assigned responsibilities of each of the proposed key contributor is shown in each of the identified areas of expertise.

It is highly desirable that the offeror provide video or other samples of related work produced by the proposed key personnel.

H.8 Facilities

The offeror shall describe in detail the facility or facilities proposed to meet the requirements of this SOW. This description shall include details of the equipment and software available in these facilities and describe whatever additional benefits may accrue to the project if these facilities are used.

H.9 Proposal Delivery

Six (6) sets of copies of the proposal (clearly marked on the outside of the envelope as "In Response to Solicitation No. 102590-94-A-0011") shall be delivered to:

USPS HEADQUARTERS
ATTN: Steve Cochran
475 L'Enfant Plaza, West, SW
Room 4541
Washington, DC 20260-6230